

DOCUMENTS DEPT.
SAN FRANCISCO
PUBLIC LIBRARY

CLOSED
STACKS

GOVERNMENT INFORMATION CENTER
SAN FRANCISCO PUBLIC LIBRARY

5/closed


MAR 18 1978

DOCUMENTS DEPARTMENT

SAN FRANCISCO PUBLIC LIBRARY



3 1223 90187 5402



Digitized by the Internet Archive
in 2012 with funding from
California State Library Califa/LSTA Grant

<http://archive.org/details/annualreport196465196970s>

264-65

DEPARTMENT OF ELECTRICITY

ANNUAL REPORT

1964-1965

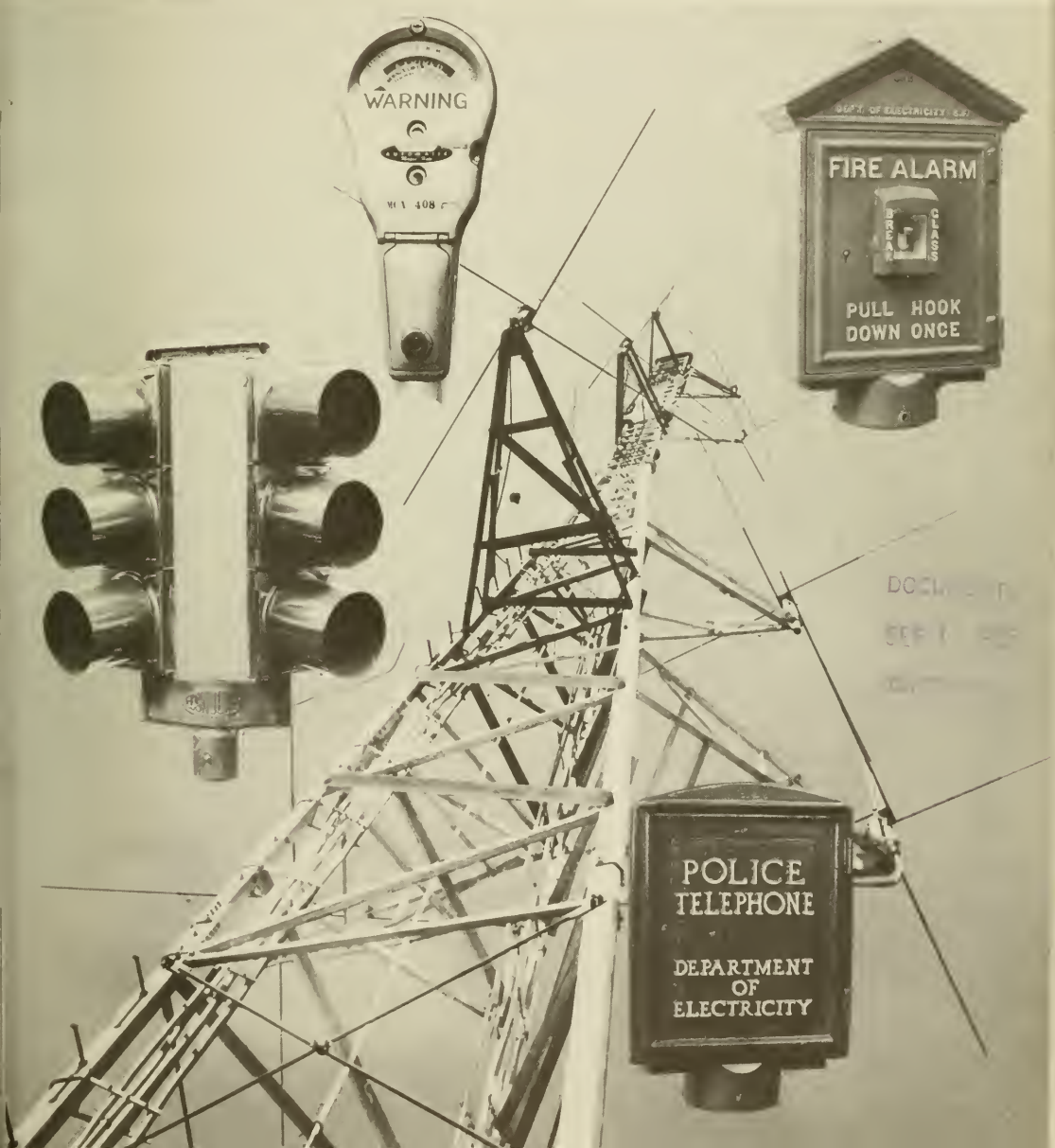


TABLE OF CONTENTS

LETTER OF TRANSMITTAL.....	FRONT
ADMINISTRATION.....	4
FIRE ALARM OPERATION.....	10
ELECTRICAL MAINTENANCE.....	12
MECHANICAL MAINTENANCE.....	29
RADIO COMMUNICATION.....	42
COMMUNICATION DIVISION OF DISASTER CORPS.....	49

* 352.5
Sa 5265a
1964-65
to
1969-70

ILLUSTRATIONS

ORGANIZATION CHART.....	FRONT
GENERAL MANAGER.....	1
ADMINISTRATIVE STAFF.....	3
CHART.....	8
GRAPH.....	9
LINE AND CABLE.....	14
TRAFFIC SIGNAL AND ELECTRICAL.....	21
MACHINE SHOP.....	32
RADIO COMMUNICATION.....	45

Photography by
courtesy of-
Arnold G. Stenfors
Instrument Maker
Machine Shop

July 27, 1965

Mr. Thomas J. Mellon
Chief Administrative Officer
City & County of San Francisco
289, City Hall
San Francisco, California 94102

Dear Mr. Mellon:

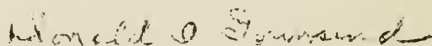
Pursuant to the provisions of Sec. 20 of the Charter of the City & County of San Francisco, I take pleasure in submitting my thirteenth Annual Report of the activities of the Department of Electricity covering the Fiscal Year 1964-1965.

Your helpful assistance with our various problems, particularly in strengthening our personnel requirements during the past year, is very much appreciated.

Since this is my final Annual Report, having elected to retire voluntarily effective September 1, 1965, I am taking advantage of this opportunity to express my deep appreciation, through you, to all of my fellow workers in City Government, and more particularly to the employees of the Department of Electricity for their constant contribution toward any degree of success in accomplishment I have enjoyed as head of what I believe to be one of the finest Departments in City Government to be found anywhere.

It is with deep satisfaction that I leave my successor an organization of dedicated Civil Service employees and excellent facilities to work with, and my best wishes for a long and successful administrative career.

Very truly yours,



DONALD O. TOWNSEND
General Manager
Dept. of Electricity

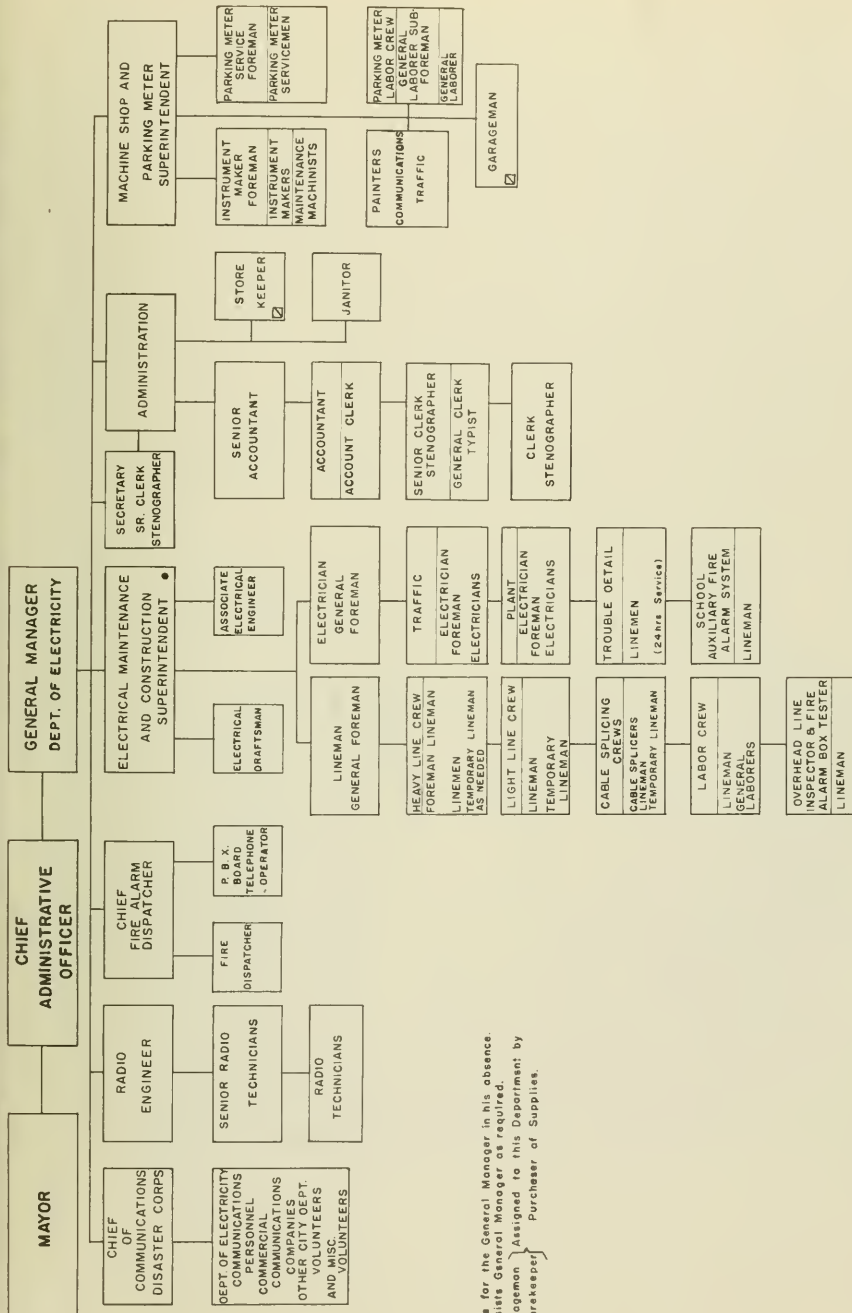


ANNUAL REPORT
DEPARTMENT OF ELECTRICITY
CITY AND COUNTY OF SAN FRANCISCO
FISCAL YEAR 1964 - 1965

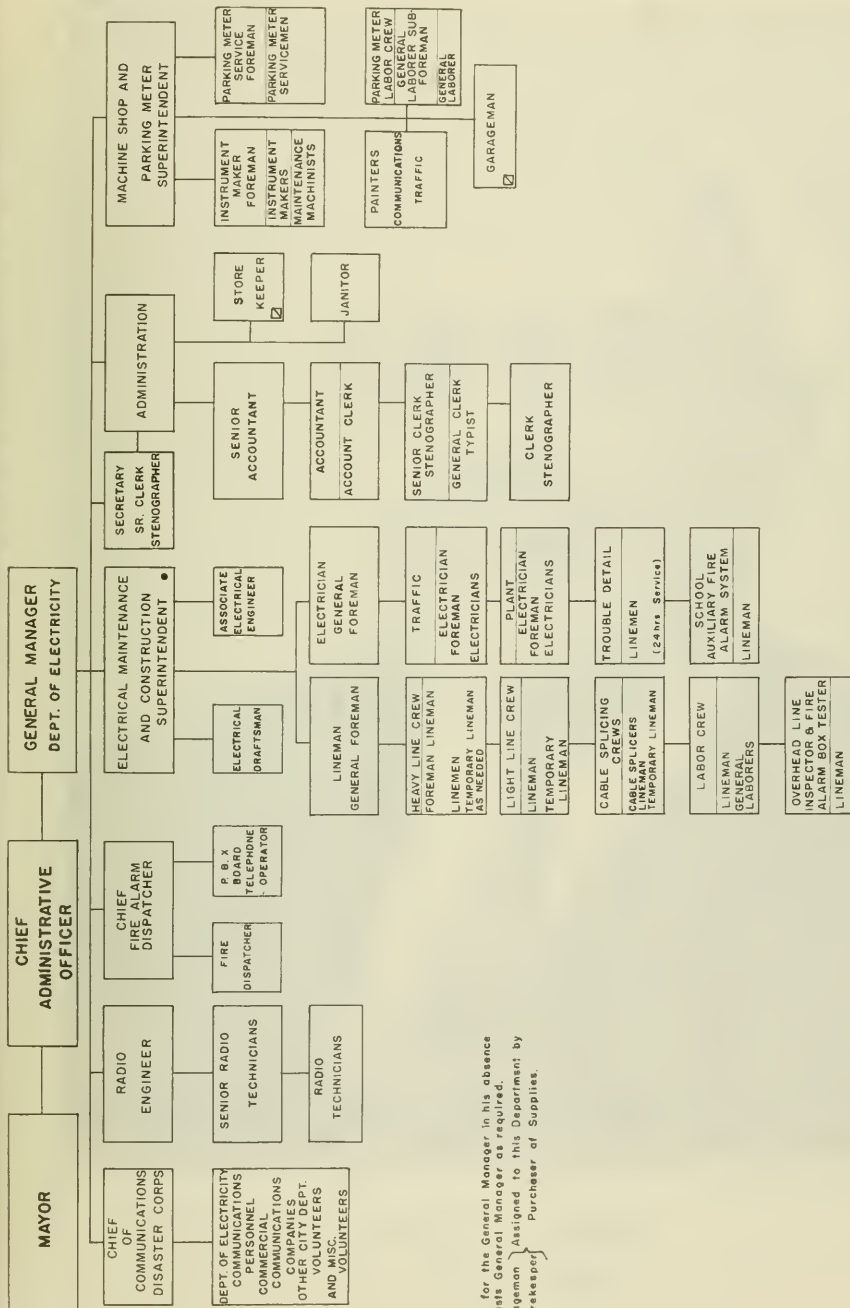
HON. JOHN F. SHELLEY
MAYOR

THOMAS J. MELLON
CHIEF ADMINISTRATIVE OFFICER

DONALD O. TOWNSEND
GENERAL MANAGER



• Acts for the General Manager in his absence.
 • Assists General Manager as required.
 Garageman } Assigned to this Department by
 Storekeeper } Purchaser of Supplies.



• Acts for the General Manager in his absence
Assists General Manager as required.
Garageman } Assigned to this Department by
Storekeeper } Purchaser of Supplies.

☑



DONALD O. TOWNSEND

General Manager
1952 - 1965

DEPARTMENT OF ELECTRICITY

On January 2, 1932 the present City and County of San Francisco Charter became effective, transferring control of the Department of Electricity from the Joint Board of Police and Fire Commissioners to the Chief of the Department of Electricity who, in turn, is directly responsible to the Chief Administrative Officer of the City and County of San Francisco.

Since the conception of this department, progress in the means of travel resulting in unforeseen traffic control problems, the advancement in the art of communications, and general progress in the field of public safety communications, have placed many an additional responsibility upon this department. In fact, the title, Department of Electricity, is no longer descriptive of the function of the department, and a charter amendment is in order to change the title to the Department of Communications and Electronics, or Department of Communications and Electrical Services which would more suitably describe the present day function.

This department has heavy responsibility for the safety and convenience of the people of San Francisco, their daily safety being dependent upon an efficient operation of the services we render to the Police and Fire Departments. These departments cost the citizens of San Francisco millions of dollars annually and yet could not function with their customary high degree of efficiency if the diversified services rendered by the Department of Electricity were not constantly available and efficient.

The Department of Electricity maintains and operates the City's Traffic Signal System of 706 signalized intersections. The traffic signal timing is prescribed by the Traffic Engineering of the Department of Public Works and maintained by the Department of Electricity.

The Department of Electricity also maintains and operates the City's Parking Meter System of 12,600 meters. An accurate account of the complete history of each meter is maintained, since we are called upon by the courts to provide reports in connection with protests.

The Department of Electricity is by law the Communications Division of the San Francisco Disaster Corps and under major emergency conditions has an added responsibility for providing and maintaining additional, necessary communications for the public safety. The department is also responsible for the design, installation and maintenance of the several mobile radio systems in daily use by the miscellaneous departments of City Government.

ADMINISTRATIVE STAFF



GRACE WENHAM
Secretary to
General Manager



ROBERT YUEN
Senior Accountant



JOSEPH A. PETRINI
Machine Shop & Parking
Meter Superintendent



BURTON H. DOUGHERTY
Radio Engineer



DOYLE L. SMITH
Electrical Maintenance
& Construction
Superintendent

ADMINISTRATION OFFICE

The Administration Office at 901 Rankin Street is charged with the basic function of fiscal control. This includes but is not limited to budgeting, cost accounting, statistics, billing, cash reconciliation, and financial statements.

In addition to budgetary control of appropriated and other funds under the municipal system of accounting, the nature and performance of certain jobs require the computation of unit cost as well as job cost. All labor and material data from the field, plant and shops flow into the Administration Office daily for the purpose of summary and control. Overhead expense, i.e., indirect labor, depreciation, etc., are allocated to the job by the accounting personnel.

Internal statements are prepared periodically for the information and guidance of division heads showing the allotment, expenditure, encumbrance and unencumbered balance for each line item in their respective budget allowances. Other statements, schedules and reports are submitted to the Controller.

With the exception of one supplemental appropriation in the amount of \$1,730 for overtime due to sickness at the Fire Alarm Office, which is beyond the control of management, the year ending June 30, 1965 discloses operating cost to be within our budget allowances. Transfer of surplus funds from one appropriation to another, where necessary to maintain efficient continuous operation, were used with the approval of the Chief Administrative Officer and Controller.

An audit of our accounts were made in June 1965 by John F. Forbes & Company, certified public accountants, as part of the Controller's program to examine departmental procedures pertaining to revenues, time-rolls, work orders, procurement, etc.

Personnel assigned to Administration consist of the following:

- 1 - General Manager
- 1 - Senior Accountant
- 1 - Accountant
- 1 - Account Clerk
- 1 - General Clerk-Typist
- 2 - Senior Clerk-Stenographer
- 1 - Storekeeper
- 1 - Janitor

INSPECTION FEES

Regulatory and inspectional services are rendered to the public for which a fee is charged. The fee chargeable is based on the direct and indirect cost to this Department. Computation for setting of fees is made annually to determine if total cost is in relation to total amount received.

Inspection services for the year ending June 30, 1965 are briefly stated as follows:

1. Any person, firm, partnership or corporation charged with the security of the public's funds or other things of value or engaged in the business of installing and maintaining security alarm signal systems shall pay to the Department of Electricity such fee or fees for the connection, maintenance and/or termination of each police terminal alarm.
2. The sound amplifier and loudspeaker system installed on the vehicle is inspected to determine that the design power output of the amplifier is not exceeded and that the audio quality of the installation is not impaired by excessive distortion.
3. Inspect the route to be taken by the housemover and make sure that Department of Electricity overhead line wires will be cleared.
4. Every corporation, co-partnership or individual placing or installing electric wires, appliances, apparatus or equipment in, on or about any building in connection with either or both of the Fire or Police Telegraph and Telephone Signal Systems, shall pay to the Department of Electricity for such installation, construction or equipment and the monthly maintenance thereof.

STATEMENT OF APPROPRIATED AND OTHER FUNDS

FISCAL YEAR ENDING JUNE 30, 1965

	<u>Total Allowance</u>	<u>Total Cost</u>	<u>Unused Balance</u>
<u>Administration & Operation:</u>			
Personal Services	\$ 193,638	190,606	3,032
Contractual Services	4,517	1,589	2,928
Material & Supplies	950	869	81
Equipment	468	442	26
Telephone & Telegraph	7,710	7,560	150
Light, Heat & Power	10,168	9,670	498
<u>Maintenance & Construction:</u>			
Personal Services	940,497	914,512	25,985
Contractual Services	2,486	2,199	287
Material & Supplies:			
Machine Shop	19,508	19,310	198
Radio Communication	15,791	15,662	129
Traffic Signal	38,350	37,568	782
Plant (Electrical)	18,968	18,716	252
Equipment	18,349	16,647	1,702
Maintenance & Repair of Equipment	6,625	6,625	
Fuels & Lubricants	5,750	5,647	103
<u>Reconstruction & Replacement:</u>			
Judson Ave., Underground District	9,137	1,141	7,996
Marina Underground District	<u>30,603</u>	<u>3,332</u>	<u>27,271</u>
Total 1964-65 Appropriation	\$1,323,515	1,252,095	71,420
<u>Interdepartmental Work Orders:</u>			
Machine Shop	25,097	21,512	3,585
Radio Communication	52,234	48,368	3,866
Traffic Signal Maintenance	18,737	16,082	2,655
Plant (Electrical)	24,018	16,382	7,636
<u>Private Contractors:</u>			
Traffic Signal Relocation	1,159	245	914
Plant (Electrical)	6,311	5,965	346
<u>Continuing Appropriation:</u>			
Installation Fund	<u>11,880</u>	<u>11,880</u>	
Funds Available for Expenditures	<u>\$1,462,951</u>	<u>1,372,529</u>	<u>90,422</u>

SUMMARY

Budget Allowances	\$ 1,323,515	
Other Funds	<u>139,436</u>	
Total Funds Available		1,462,951
Less: Expenditures & Encumbrances	1,372,529	
Work in Progress (Note 1)	<u>54,269</u>	<u>1,426,798</u>
Unencumbered Balance of Appro. (Note 2)	\$	<u>==36.153</u>

(Note 1) Work in Progress consist of uncompleted work orders, private contractors and specific projects. This amount is carried forward to fiscal year 1965-66.

(Note 2) Unencumbered Balance of Appropriations lapse at the end of fiscal year 1964-65 and return to Unappropriated Surplus on June 30, 1965.

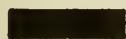
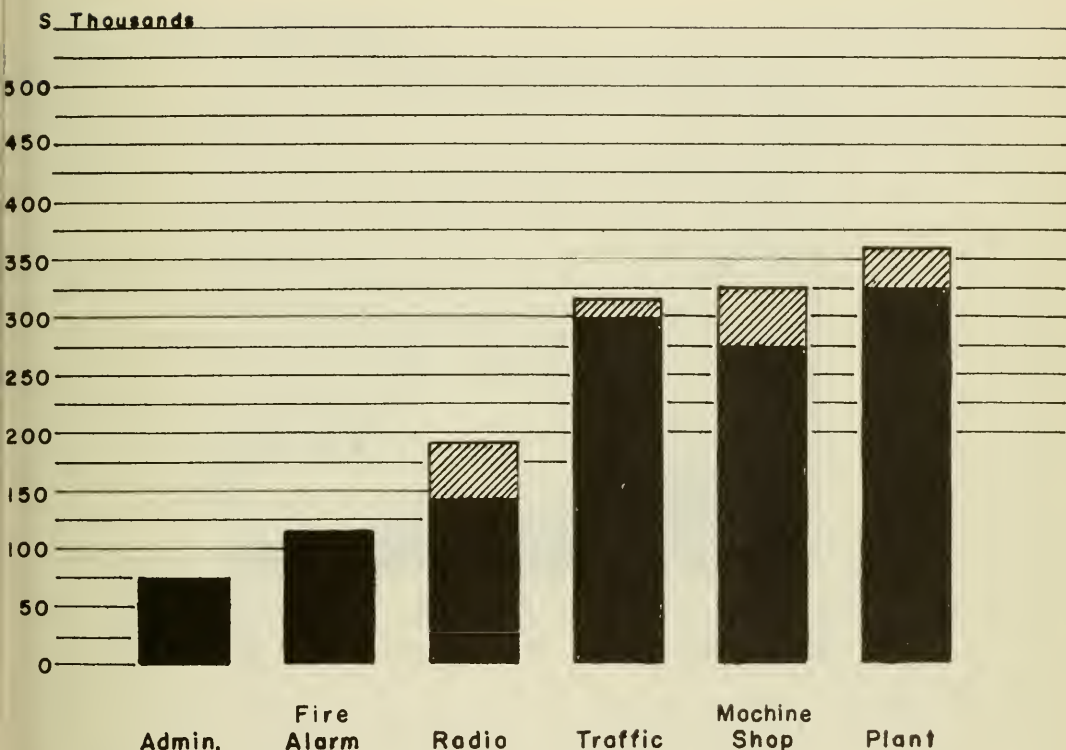
=====

STATISTICAL HIGHLIGHTS

<u>Fiscal Year</u>	<u>Specific Projects</u>	<u>Work Orders</u>	<u>Operating Budget</u>	<u>Total</u>
1959-60	5.5%	10.0%	84.5%	100%
1960-61	12.5%	10.5%	77.0%	100%
1961-62	1.7%	3.4%	94.9%	100%
1962-63	6.9%	4.6%	88.5%	100%
1963-64	7.6%	7.0%	85.4%	100%
1964-65	2.7%	8.8%	88.5%	100%

SOURCE AND USE OF FUNDS

1964-1965.



Operating Budget



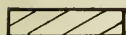
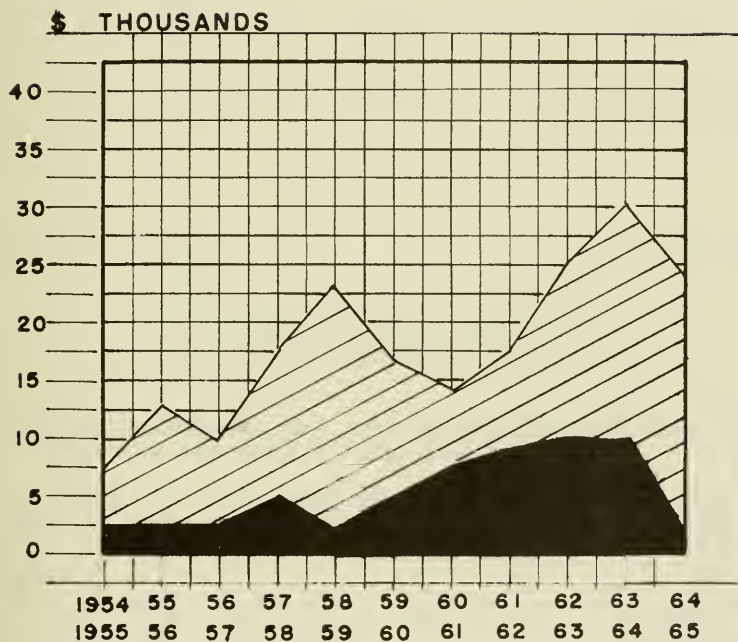
Work Orders, Private Contractors, Installation Fund.

Total Source - 1.4 million

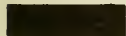
Total Use - 1.3 million



DAMAGE CLAIMS ELEVEN YEARS REVENUE



Damage to Traffic Signals



Damage to Parking Meters, Police and Fire Alarm Boxes

Job costs pertaining to damages to City property under the jurisdiction of the Department of Electricity are computed and forwarded to responsible parties for collection. In the year ending June 30, 1965 the cost of damage claims amounted to \$ 24,406



FIRE ALARM OFFICE

The Fire Alarm Office at 1003 Turk Street includes receipt of alarms and dispatching fire apparatus. It is responsible for the operation of the entire fire alarm telegraph system of San Francisco. Fire Alarm personnel also receive trouble complaints and dispatch repairmen in connection with emergency repairs to traffic signals, police and fire communication equipment, test defective circuits, and operate the Civil Defense air raid warning system.

Personnel assigned to the Fire Alarm Office consist of the following:

- 1 - Chief Fire Alarm Dispatcher
- 9 - Fire Alarm Dispatchers
- 4 - Senior Telephone Operators

The following summarizes the activities of the Central Fire Alarm Station for the year ending June 30, 1965:

First Alarms of Fire Received and Transmitted	8,709	
Second " " " " " "	126	
Third " " " " " "	49	
Fourth " " " " " "	6	
Fifth " " " " " "	1	
Stills " " " " " "	9,491	
Directs	794	
Special Calls	<u>187</u>	19,363

Secondary Signals transmitted covering Alarms of Fire and routine operational business of the Fire Department

90,569

Total Signals Transmitted

109,932

Total Fire Alarm Boxes in service: 2,017

Total Police Boxes in service: 462

FIRE ALARM OFFICE

The following summarizes complaints received from the Police Department, other Municipal Agencies and private citizens concerning equipment listed below:

Fire Alarm Wire Trouble	242
Sirens	19
Police	217
Radio	66
Traffic Signals	3,330
Teletype	31
Miscellaneous	435
Registers	204
Outside Locals	<u>1</u>
	<u>4,545</u>

Fire Alarm Boxes temporarily out of service..... 374

Fire Alarm Boxes out of service for repair,
Relief Boxes in service replacing same..... 103

SUMMARY OF WORK PERFORMED BY THE
ELECTRICAL MAINTENANCE DIVISION
FISCAL YEAR 1964-65

CONSTRUCTION, MAINTENANCE AND REPAIR OF:

- A Equipment and apparatus in connection with the Central Fire Alarm Station, and circuits to fire alarm equipment in 48 Fire Houses.
- B Circuits to and testing of 1,950 Fire Alarm Boxes at 60 day intervals.
- C Auxiliary Fire Alarm Systems in 127 Public Schools.
- D Police Department emergency telephone system, consisting of a 2-position switchboard and circuits to 460 Police Call Boxes located on the City streets and 79 locals located in the Hall of Justice and various Bureaus and Police Stations throughout the City.
- E Police teletype system consisting of two teletype transmitters and control consoles located in the Hall of Justice with circuits to 22 printers in the Hall of Justice and various Bureaus and Police Stations throughout the City.
- F Communication, Alarm and Signal Systems, new Hall of Justice.
- G Traffic Signals at 707 intersections.
- H Air Raid Sirens at 53 locations, and associated remote control equipment.
- I Overhead lines and underground cable system embracing the City's 49 square mile area.
- J Maintains related records.

FULL TIME PERSONNEL

1 - E-161	Lineman General Foreman
1 - 7276	Electrician General Foreman
13 - 7338	Lineman
1 - E-160	Foreman Lineman
3 - 7308	Cable Splicer
4 - 7514	General Laborer
14 - 7345	Electrician
2 - 7238	Electrician Foreman
1 - 5238	Associate Electrical Engineer
1 - 7131	Electrical Maintenance & Construction Superintendent
1 - 5352	Electrical Draftsman

ELECTRICAL MAINTENANCE DIVISION

Days worked by temporary personnel in Electrical Division during the fiscal year due to special projects, work orders and vacation relief.

7338 - Lineman	915 days
E160 - Foreman Lineman	218 "
7308 - Cable Splicer	64 "
7514 - Gen.Laborer	72 "
7345 - Electrician	209 "
7238 - Electrician	
Foreman	116 "

FIRE ALARM SYSTEM

Maintained fire alarm equipment in the Central Fire Alarm Station and in 48 Fire Stations; also maintained the communication systems connecting these facilities.

Repaired or replaced in Fire Stations:

- 127 - Registers
- 55 - Bells
- 45 - Relays
- 42 - Automatic Light Switches
- 58 - Intercommunication Systems
- 3 - Fire Alarm Panels

Inspected and tested with the Central Fire Alarm Station once each month, and serviced the auxiliary fire alarm system in 127 Public Schools. Responded to School Auxiliary Fire Alarm Systems 53 times.

Connected 7 Waterflow and 19 Heat Detector systems in Public Schools to Municipal Fire Alarm systems.

Installed 12 new municipal fire boxes, making a total of 1,950 boxes now in service.

Maintained 1,950 Fire Alarm Boxes located on City streets, and 70 associated circuits connecting these fire boxes to the Central Fire Alarm Station.

Fire Alarm Box tests totaling 12,846 were made in accordance with the rules of the National Board of Fire Underwriters.

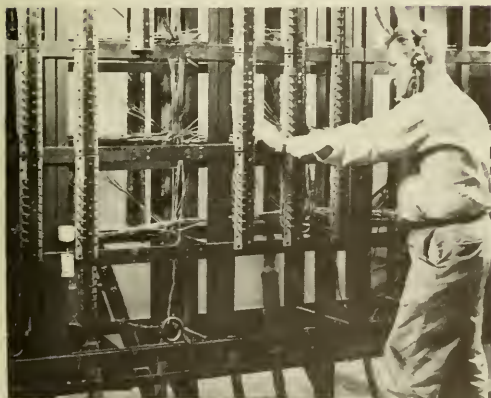
Replaced 25 old style fire boxes with modern 3-fold non-interfering type fire boxes.



Preparation for installing emergency warning siren.



Installation of emergency warning siren.



Locating underground fire alarm communication cable defects.



Maintaining public safety communication - underground cables.



ELECTRICAL MAINTENANCE DIVISION

Detail assignment repaired 23 cases of Parking Meter trouble.

Replaced 25 old style fire box shells with new center pull break glass shells.

Converted 12 fire box services from overhead wire to underground cable.

Repaired or replaced 22 fire alarm boxes damaged by vehicles.

Relocated 12 fire alarm boxes.

Removed 238 fire alarm boxes to Shop for repairs, and subsequently reinstalled.

Maintained fire alarm system in the Broadway Tunnel for the Department of Public Works.

Cleared 242 cases of trouble on overhead fire alarm circuits.

Responded to complaints and made 36 repairs on outside local fire alarm systems.

Conducted weekly tests of Market Street crossing bells. Repaired bells at 8 locations.

Rebuilt underground cable pot heads at 14 fire boxes.

Replaced 470 feet of 1/2" conduit to fire alarm boxes on wood poles.

Made repairs, alterations and improvements to overhead fire alarm system at 470 locations involving the installation of 453 crossarms and 104,290 feet of overhead line wire.

POLICE DEPARTMENT

Repaired and maintained Police Department's switchboard and related equipment at the new Hall of Justice and 79 telephones located within the building, and 462 call boxes located on the City streets, in parks and public buildings, and military and private police agencies.

Serviced and maintained the Police Teletype System; answered 38 complaints.

ELECTRICAL MAINTENANCE DIVISION

Serviced and maintained the following signal systems at the New Hall of Justice:

Status Boards

1. Communications
2. Traffic Bureau
3. Coroner

Local Telephone System

1. Chief of Police
2. City Jail Visitors
3. County Jail Visitors

Bank Alarm System

Interview Recording System

Auxiliary Fire Alarm System

Repaired 198 cases of trouble on above systems.

Replaced 20 visitors' telephone with new instruments.

Repaired 2 damaged Police Call Boxes.

Repaired or removed to the Shop for repair 73 Police Call Boxes.

Installed 2 new Police Call Boxes.

Replaced 266 feet of 1/2" conduit and wiring to Police Call Boxes mounted on wood poles.

Cleared 217 cases of trouble on overhead Police circuits.

Cleared 85 cases of trouble on underground Police circuits.

Made repairs, alterations and improvements to Police overhead lines at 69 locations, involving the installation of 43 crossarms and 6,350 feet of overhead line wire.

CITY AND COUNTY RADIO SYSTEM

Tested and serviced once each week the two emergency generators and associated power plant equipment at the Central Radio Station, Christmas Tree Point, Twin Peaks.

Maintained the land lines between the Central Radio Station and the control units located in the Hall of Justice, Central Fire Alarm Station, and various other City departments who use the City and County Radio System in their daily operations.

DISASTER CORPS

Serviced, maintained and conducted weekly tests of the City's 53 Air Raid Sirens and associated remote control circuits and equipment. Located and cleared or reported to Pacific Telephone Co., for clearance 50 cases of trouble on Air Raid Sirens or control circuits. Maintained emergency power generators, batteries and associated electrical control equipment at the Civil Defense Control Center.

ELECTRICAL MAINTENANCE DIVISION

Disconnected Sirens on 35 occasions to permit P.T.&T.Co. to work on cable without setting off sirens.

Removed 5 pole top mounted sirens to Shop for rehabilitation and reinstalled same.

Inspected all sirens for paint condition.

Scraped and painted 6 pole mounted sirens.

INSTALLATIONS, RELOCATIONS AND REMOVALS

Central Fire Alarm Station

Rebuilt fluorescent fixtures on main floor.

Fire Houses

Installed Fire Alarm System in Fire House No. 5 Engine and No. 42 Engine in connection with new quarters for Battalion Chiefs.

Installed new intercommunication systems in 4 Fire Houses.

Replaced old style wooden Fire Alarm Panels with new dead front style in 3 Fire Houses.

Installed new taper bells in 4 Fire Houses.

Central Radio Station

Replaced clearance lights on Radio Tower.

Replaced photo-cell units for tower light controls.

Plant Building & Maintenance Yard, 901 Rankin Street

Installed fluorescent lighting in following offices:

- Storekeeper
- Machine Shop Foreman
- Traffic Shop Foreman
- Radio Shop Foreman
- Radio Shop Clerk
- Radio Shop Fire Room
- Radio Inside Shop
- Radio Shop Waiting Room

ELECTRICAL MAINTENANCE DIVISION

UNDERGROUND DISTRICTS - NEW SUBDIVISIONS: RELOCATION FOR FREEWAYS, BOULEVARDS, ETC.

Conversion of Department of Electricity facilities from overhead to underground systems in:

Telegraph Hill, Stage II and III	100%
Diamond Heights	100%
Francisco Heights, Stage I and II	80%
Bush St., Van Ness to Geary	100%
Washington & Spruce, Stage I	100%

Relocated Department of Electricity facilities to accommodate Freeway construction:

Southern Freeway:	
Mission to Ocean	100%
Orizaba to County Line	40%
Newcomb to Army	50%
Army to 18th St.	55%

Performed special jobs for Fire Alarm Auxiliary Co., and various contractors installing conduit, cable and related equipment for auxiliary connections to City Fire Alarm Boxes.

Various Contractors:

Civic Auditorium
S.F. General Hospital

Pacific Fire Extinguisher Co.
675 Townsend

Pacific Auxiliary Company -
Protestant Episcopal Lady's Home
Lyon & Lombard Sts.
Garden Hospital
2750 Geary St.
Pacific Telephone & Tel. Co. Building
Folsom & Hawthorne Sts.
Golden Gateway Area
Jackson & Davis Sts.
Washington & Front Sts.
Battery & Jackson Sts.
U.S. Post Office Building
7th and Mission Sts.
University Mound Old Lady's Home
350 University Ave.

ELECTRICAL MAINTENANCE DIVISION

Prepared estimates for new Underground Districts and Street Improvement Projects:

Telegraph Hill, U.G. District 169, Stages IV & V
Washington & Spruce, U.G. Dist. 174, Stage II
Bosworth, Lippard to O'Shaughnessy, U.G. Dist 175, Stage II
O'Shaughnessy - Bosworth to Portola Drive, U.G. Dist 175,
Stage III
Geneva, San Jose to Ocean, U.G. Dist. 177
Locust St., Clay to Pacific, U.G. Dist.
Golden Gate Heights U.G. Dist.
Myra Glen Subdivision, Underground Cable

State Harbor Modernization Program, Service Agreement No. 141:

Replaced 9 obsolete Fire Boxes with new modern
three-fold boxes.

Repairs, alterations or improvements were made to fire alarm,
police and traffic underground cable systems at 939 locations
requiring the installation of approximately 26,937 feet of cable
and 1,933 feet of underground conduit.

Checked routing and overhead line clearance in connection with
29 House Moving Permits.

Checked 403 Pacific Telephone Company excavation Permits (to
determine whether a duct should be provided for the Department
of Electricity).

Surveyed and checked Department of Electricity underground facilities
and marked locations on the surface of the street in connection
with numerous track removal, sewer, water, and other street
improvement projects.

Relocation of Department of Electricity facilities for various
contractors to accommodate building construction during the fiscal
year, amounted to \$6,311.

Maintenance services performed on a work order basis for other
City Departments, amounted to \$24,018.

Transferred Department of Electricity overhead lines to new poles
at 101 locations.

* * * * *

ELECTRICAL MAINTENANCE DIVISION
SUMMARY OF TRAFFIC SIGNAL MAINTENANCE
FISCAL YEAR 1964-65
=====

The Traffic Signal Maintenance Division responded to a total of 3314 specific complaints requiring immediate attention. This is 64 less than was received during the last year.

These complaints were received from various governmental agencies; both municipal and State; private citizens, and from the personnel of the Department of Electricity. In addition a planned program of preventative maintenance was followed as the work load allowed.

New signal controlled intersections added during the year were as follows:

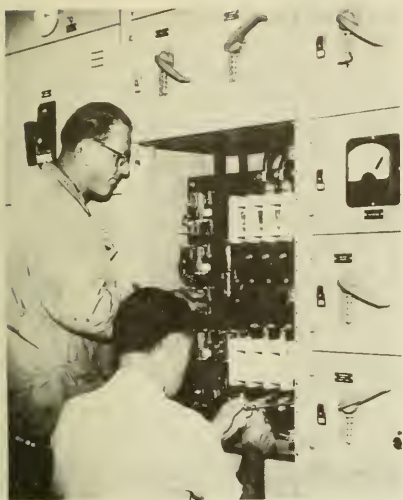
Geneva Ave. & Santos St., at the Cow Palace.	In service	7-31-64
Monterey & Circular.....	" "	11-9-64
Monterey & Diamond.....	" "	11-9-64
Franklin & Clay.....	" "	11-11-64
Franklin & Washington.....	" "	11-11-64
Franklin & Jackson.....	" "	11-11-64
Union & Gough.....	" "	11-11-64
Franklin & Vallejo.....	" "	11-12-64
Franklin & Greenwich.....	" "	11-13-64
Franklin & Green.....	" "	11-19-64
Franklin & Filbert.....	" "	11-23-64
Alemany & Santa Rosa, one way 3-section heads were installed on North & South center islands.....	" "	11-30-64
Geary & Leavenworth.....	" "	1-18-65
Turk & Stanyan.....	" "	1-28-65
Pacific & Mason.....	" "	2-2-65

Complaints By Month

July 1964.....	233	January 1965.....	267
August ".....	220	February ".....	291
September ".....	251	March ".....	304
October ".....	280	April ".....	391
November ".....	274	May ".....	367
December ".....	256	June ".....	280

There were 228 complaints covering damages; previously all complaints covering hit signals were classed as damages but in order to cut down on the amount of paper work only complaints of hit signals using materials are now considered as damages, in part as follows:

TRAFFIC SIGNAL AND COMMUNICATION ELECTRICIANS



Repairs and adjustments to emergency power system transfer panel - Central Radio Station.



Painting traffic signal.



Testing traffic signal dispatcher



Final adjustments to traffic signal dispatcher.



TRAFFIC SIGNAL MAINTENANCE

- 21 - 10 Foot Marbelite Poles were replaced.
 - 13 - 10 Foot Steel Tubular Poles.
 - 8 - Controllers or Bases were replaced.
 - 5 - 2½" Pedestrian Pushbutton Posts along with
33 Signal Heads knocked off poles were replaced.
 - 276 - Signal Head realignments were made.
- The other damage complaints covered the replacement of missing Signal Head Visors or the straightening of same.

A total of 408 complaints required following up the next shift or work day.

PREVENTATIVE MAINTENANCE

Signalized Intersections Maintained as of June 30, 1965:

Fixed Time 3-Light.....	541
Traffic Actuated.....	<u>165</u>
Total....	706

Fixed Time Equipment Repaired or Serviced in the Shop

Controllers.....	144
Dial Units.....	225
Relays.....	695
Flashers.....	20
Masters & Assoc.Units...	13
I.B.M. Program Units....	<u>2</u>
Total....	1099

Field Work - Fixed Time

Controllers Serviced....	135
Complete Intersection...	131
Walk-Wait & Walk-Don't...	63
Individual Master Servicing.....	363
Individual Cascade Sta. Servicing and checks made.....	120
Timing Cards Placed.....	96
Timing Checks Made.....	96
Timing Changes.....	85
Offset Checks Made.....	345

Associated Traffic Control Equipment maintained:

No Left Turn Signs.....	22
Walk-Wait Units.....	924
Vehicle Pressure Detectors..	671
Pedestrian Pushbuttons.....	<u>515</u>
Total.....	2132

Traffic Actuated Equipment Repaired or Serviced in the Shop

Dispatchers.....	293
Associated Dispatcher Units.	175
Relays.....	299
Flashers.....	14
Timers.....	3
Masters and Assoc.Units....	<u>39</u>
Total.....	823

Field Work - Actuated

Complete Intersection Service	131
Walk-Wait, Walk-Don't Walk...	7
Individual Master Servicing.	122
Detector Pads changed.....	107
Detector Pads retightened...	26
Detector Frames repaired....	24
Detector Frames replaced....	8
Pedestrian Pushbuttons Changed.....	75

TRAFFIC SIGNAL MAINTENANCE

Traffic Signal Lamps, Walk-Wait and Walk-Don't Walk Neon Tubes, Fluorescent Tubes and Transformers Replaced

Three-Light Type 67-Watt.....	5830
Three-Light Type 100-Watt.....	17
Beacon Lights 200-Watt.....	4
Floodlights 300-Watt.....	-
Floodlights 620-Watt.....	-
Neon Tubes "Walk".....	157
Neon Tubes "Wait".....	65
Fluorescent Tubes.....	4
Gaseous Tube Transformers.....	10

Fixed Time Controllers Exchanged For Shop Repairing Or Servicing

<u>1964</u>		<u>1965</u>	
July.....	19	January.....	5
August.....	6	February.....	9
September.....	8	March.....	12
October.....	4	April.....	9
November.....	7	May.....	10
December.....	8	June.....	<u>12</u>
		Total	109

Fixed Time Dial Units Exchanged for Shop Repairing or Servicing

<u>1964</u>		<u>1965</u>	
July.....	1	January.....	1
August.....	2	February.....	1
September.....	2	March.....	1
October.....	11	April.....	2
November.....	3	May.....	5
December.....	5	June.....	<u>3</u>
		Total	36

Fixed Time Relays Exchanged For Shop Repairing Or Servicing

<u>1964</u>		<u>1965</u>	
July.....	4	January.....	21
August.....	7	February.....	14
September.....	8	March.....	20
October.....	15	April.....	10
November.....	19	May.....	-
December.....	16	June.....	<u>17</u>
		Total	151

TRAFFIC SIGNAL MAINTENANCE

Traffic Actuated Dispatchers Exchanged For Shop Repairing or Servicing

<u>1964</u>		<u>1965</u>	
July.....	16	January.....	45
August.....	29	February.....	34
September.....	23	March.....	64
October.....	59	April.....	29
November.....	31	May.....	63
December.....	47	June.....	<u>38</u>
		Total	478

Traffic Actuated Associated Equipment Exchanged For Shop Repairing Or Service

<u>1964</u>		<u>1965</u>	
July.....	21	January.....	8
August.....	6	February.....	5
September.....	17	March.....	64
October.....	12	April.....	6
November.....	16	May.....	7
December.....	10	June.....	<u>20</u>
		Total	192

Traffic Actuated Relays Exchanged for Repairing Or Service

<u>1964</u>		<u>1965</u>	
July.....	7	January.....	21
August.....	20	February.....	20
September.....	18	March.....	30
October.....	21	April.....	-
November.....	-	May.....	-
December.....	16	June.....	<u>19</u>
		Total	181

Conducted a bi-weekly test of the Freeway Detour Signs controlled from the Central Fire Alarm Station.

Conducted a monthly test of the Fire Alarm Boxes and the Traffic Signal Pre-empt Circuits in the Broadway Tunnel.

Conducted weekly tests of eight Cable Car Pre-empt Intersections, one Cable Car Crossing and one Turn-Table Location.

Reset Time Clocks and Program Devices one hour ahead in April and back one hour in October at 33 locations to conform to the California State Daylight Saving Time.

In addition to answering complaints and regular servicing and repairs, Job Orders and Work Orders amounting to \$18,737.00 were performed for contractors and Traffic Engineering. This work involved alterations to and new work on the traffic signal system.

An emergency order was passed by the San Francisco Board of Supervisors for the installation of Traffic Signals at the intersection of Geneva and Santos Street (Cow Palace). This was put into service on July 31, 1964.

TRAFFIC SIGNAL MAINTENANCE

Guerrero at Camp Streets - changed Mission Cycle Selector System to 60 second emergency cycle unit, removed off-set selector, system selector and period timer and harness in order to operate on one cycle length.

To avoid being damaged when struck by a vehicle, full circle rubberized type visors were installed at the following intersections:

Lombard and Divisadero, Potrero and 17th St., 16th and Dolores, and Harrison and 10th St.

Door stops were installed at 22 locations on Type M Automatic Signal Cabinets to prevent wind from breaking off the doors.

Placed protective guard posts at 19th and Irving and Ocean and Faxon to protect the controller cabinet from damage by vehicles.

At the following locations: Post & Jones, Geary & Taylor, and Turk and Larkin, removed circuit breakers and replaced with cut-out block and fuses. This is to overcome the circuit breaker opening under vibration or jarring.

Fulton and Masonic - installed section of conduit between PG&E and Dept. of Electricity sidewalk pull boxes and pulled in wire to change from overhead service to underground.

At 10 locations on Mission St., from 14th to 25th and on Folsom from 24th to 14th Streets. Removed Local Mc 3 offset units and installed modified units now operating as synchrolizers.

Modified 30 - Mc 3 Local Offset Units in shop for use as synchrolizers in the Mission District.

Modified one 1033 Dispatcher Cabinet as recommended by the Automatic Signal Division.

Post and Laguna - pulled in new service wires between N.E. pole and the manhole in the street and spliced at base of pole.

Van Ness and Clay - removed metal visors and installed rubberized type on S.W. Signal Head.

Third and 16th Streets - removed case iron pull box cover and installed steel cover to accommodate installation of a Service Station.

TRAFFIC SIGNAL MAINTENANCE

Geary and Masonic - installed controller to convert this intersection from two-phase to three-phase operation.

San Jose and Randall - disconnected center island signal head to permit contractor to change the street light pole and reconnect same.

Mission and Fourth - removed controller cabinet and reinstalled new one due to old one being damaged by an electrical burn out.

Modified 22 Mc 3 and 6 Mc 4 Units to run on sixty cycle current to be used in the Mission District.

Mission Master - connected Type F Dial Unit Master into system and checked operations on all off-sets.

San Jose and 29th - installed recording voltmeter to check for fluctuating voltage.

Pine and Sansome - due to construction work being done on new building removed Walk-Wait Signals and reinstalled same on a temporary pole. Re-routed 1½" conduits and reconnected same.

Third and Arthur - replaced red light section of North Center Island Head.

Oak and Fillmore - replaced vehicle damaged controller cabinet and made necessary connections and put on bonding straps.

Third and 16th Streets - replaced damaged transite conduit and pulled in master cable and reconnected same.

Howard and 5th Streets - put South of Market Master on PM peak from 1100 to 1800 for the holiday shopping at the request of the Traffic Engineering Department.

Columbia and Pacific - rewired the controller in the shop.

Bayshore and Arleta - North Center Island Signal Head and pole hit and knocked down - installed new pole and heads.

Post and Leavenworth - repaired and replaced damaged dial unit.

TRAFFIC SIGNAL MAINTENANCE

19th and Moraga - replaced damaged conduit to signal head on the North Center Island.

Folsom and Fremont - replaced damaged conduit on North East corner.

Mission and Main - replaced damaged signal head and Walk-Wait Head and pulled in new service wires and made necessary connections.

Oak and Masonic - replaced damaged conduit on North East corner.

Bayshore and Third Street - removed damaged pole and flasher and cabinet and installed new pole on pole flange and remounted flasher and control cabinet.

Columbus and Filbert - replaced damaged conduit to pole riser and pulled in new electric service.

Van Ness and O'Farrell - pulled in new service wires to controller cabinet from PG&E manhole.

Broadway and Montgomery - removed time clock and flasher operation and set up Dial No. 3 and installed same for P.M. operation as per Traffic Engineering.

Pierce and Pine - removed damaged controller cabinet and installed and connected new one.

Dolores and 24th St. - repaired severed conduit and pulled in and re-connected new ones.

Alemany and Santa Rosa - repaired short in B phase lights.

Alemany and Silver - pulled in new wires for signal head.

California and Powell - installed indicating lights in control house as requested by Municipal Railway and required wiring.

Powell and California - installed signals and controller in control house as requested by Municipal Railway.

Diamond and Monterey - pulled in new service wires to separate street light and traffic signal circuits.

Made numerous alterations during the year to meet changes requested by the Traffic Engineering Department.

TRAFFIC SIGNAL MAINTENANCE
=====

Priority should be given to the replacement of the 73 General Electric Fixed Time Controllers which have been out of production for approximately 8 years with no replacement parts available for the last 7 years. About four were replaced during the year on outer Third Street. This replacement program should be accelerated as the Controllers are wearing out.

During year 110 Detector Pads were replaced:

Four foot	13	@ \$105.40 each	\$	1,370.20
Six foot	91	@ \$110.40 each		10,046.40
Eight foot	6	@ \$148.60 each		<u>879.60</u>
				12,296.20
		Sales Tax @ 4%		<u>491.84</u>

Replacement costs for Detector Pads only....\$ 12,788.04

Replacement costs for detector pads are a continual re-occurring expense. The labor cost is also to be considered. Some other means of detection or counting should be considered.

To date we have had very favorable success with an R.C.A. VE-DET loop vehicle detector installed at Third and Channel Streets for over two years, and have not had a trouble call regarding same even though this is a street of extremely heavy traffic flow.

* * * *

MECHANICAL DIVISION
FUNCTIONS
MANUFACTURE, MAINTENANCE &
REPAIR

The Machine Shop and Parking Meter Superintendent, under general direction of the General Manager, supervises all maintenance and repair to all mechanical equipment under the jurisdiction of the Department of Electricity.

This equipment includes 1951 Fire Alarm Boxes, 461 Police Patrol Boxes, all Instruments, Recorders, etc., at the Central Fire Alarm Station, all mechanical equipment at the Central Radio Station, 706 Traffic Signal Controlled Intersections, 12,600 Parking Meters (191 of which are situated in off-street Parking Lots), and 53 Air Raid Warning Sirens.

Work is accomplished by the personnel of the Mechanical Division:

- 1 - Machine Shop and Parking Meter Superintendent
- 1 - Instrument Maker Foreman
- 6 - Instrument Makers
- 5 - Maintenance Machinists
- 1 - Parking Meter Serviceman Foreman
- 15 - Parking Meter Servicemen
- 4 - Painters
- 1 - Laborer Sub-Foreman
- 1 - Laborer

The painting and appearance of this equipment is the obligation of this Division and the painting program is continued to the fullest extent with the available personnel.

Fifty-one (51) pieces of gas engine driven equipment - 45 mobile, 6 stationary, are kept in repair by the Purchasing Shops, but are under the control of the Machine Shop and Parking Meter Superintendent.

The maintenance of three Departmental Buildings are directed by the Machine Shop and Parking Meter Superintendent, though the work is accomplished by the Department of Public Works or through contractual services.

MECHANICAL DIVISION FUNCTIONS

The Mechanical Division synchronizes its activities to cooperate with other Departments of the City and with the Plant, Electrical, Traffic, and Radio Divisions of the Department of Electricity to better serve the public.

Manufacturing

Various three-fold non-interfering Fire Alarm Boxes were made to replace numerous obsolete Fire Alarm Boxes in the High Value Districts, and old-type Fire Alarm Boxes were rebuilt to modern standards. Replacement parts and/or component parts for Fire Alarm Boxes, Police Patrol Boxes, Registers, Instruments, were manufactured in the Machine Shop as needed.

Forty (40) new Parking Meter installations were made on side streets and one hundred ninety one (191) new installations were made in five (5) off-street parking lots.

Miscellaneous tool and die and experimental projects were undertaken and completed. Special mechanical fixtures and apparatus were designed and manufactured for the various divisions of this Department to produce functional improvement.

Maintenance and Repair

Preventative maintenance and all necessary repairs were performed on all equipment pertaining to the Department of Electricity.

Painting

Fire Alarm Boxes, Police Patrol Boxes, Traffic Signals and Controllers, Air Raid Sirens, Parking Meters, and other miscellaneous equipment were prepared and painted in the Shop and Field.

Other Duties

Data was compiled for the Annual Budget of this Division by the Machine Shop and Parking Meter Superintendent, necessary specifications for machinery and automotive equipment were written and requisitions for equipment and supplies were made. Reports and correspondence related to the Mechanical Division were processed. Records on all mechanical equipment and all parking meter field and shop services were kept.

A close liaison between this Division, the Police Department, and the Department of Finance and Records will be maintained to perform a better Parking Meter Service for all concerned.

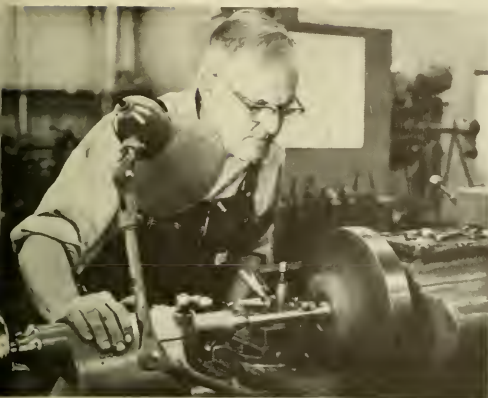
PERCENT OF PERSONNEL ALLOCATED - VARIOUS DIVISIONS

No.	Class	Title	Fire	Police	Traffic	Radio	Parking Meters	Air Raid & C.D.	Misc.
1	7123	Machine Shop & Parking Meter Supt.	29	12	20	1	45	3	5
1	7234	Instrument Maker Foreman	25	12	15	3	30	5	10
6	7331	Instrument Makers	50	12	20	5	-	3	10
4	7343	Maintenance Machinists					100		
1	7516	General Laborer SubForeman					100		
1	7514	General Laborer					100		
1	7243	Parking Meter Serviceman					100		
15	M280	Foreman Parking Meter Serviceman					100		
2	7444	Parking Meter Serviceman					100		
4	7346	Painters	2-70	1-25	2-100	1-1	1-20	1-5	1-9
1	B512	Gen.Clk-Typist	5	3	5	1	85		1

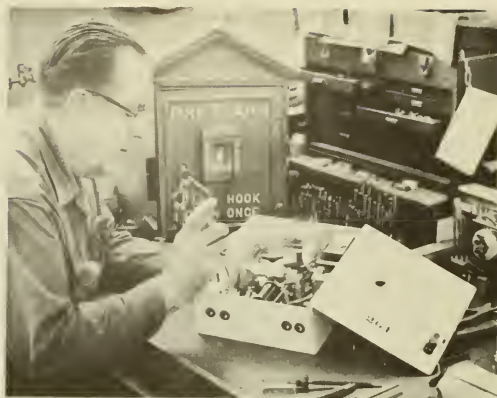
Temporary personnel were hired for vacation relief and special projects as follows:

1 - 7243	Parking Mtr. Serv. Foreman	15 days
1 - 7331	Instrument Maker	115 "
1 - 7343	Machinist	390 "
2 - 7346	Painters	153 "
2 - 7444	Parking Mtr. Servicemen	192 "

MACHINE, INSTRUMENT AND PARKING METER SHOP



Machine Shop lathe operation.



Assembling improved fire alarm box.



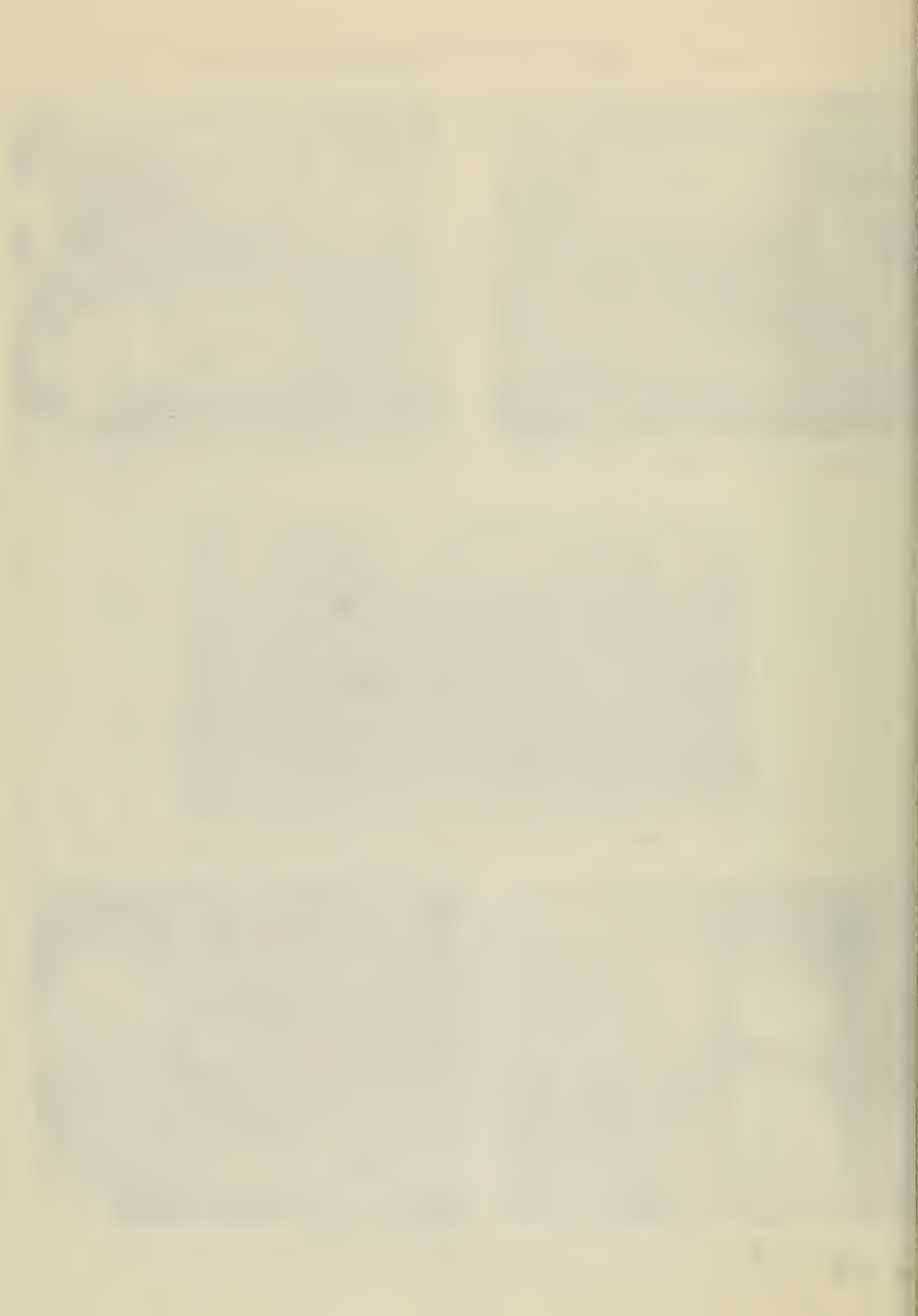
Parking meter service section of Machine Shop.



Removing parking meter heads from damaged posts.



Refinishing fire alarm boxes.



MACHINE SHOP
SUMMARY OF ACTIVITIES
FISCAL YEAR 1964-65
=====

FIRE ALARM SERVICE

Manufactured - New Equipment and/or Components

- 54 - Fire Alarm Boxes - Department of Electricity Gamewell.
- 2 - Fire Alarm Boxes - Department of Electricity.
- 52 - Fire Alarm Box Outer Doors.
- 60 - Fire Alarm Box Outer Shells, and assembled.
- 50 - Fire Alarm Box Inner Shells, and assembled.
- 50 - Fire Alarm Box Single Bases.
- 12 - Fire Alarm Box Combination Bases.
- 300 - Fire Alarm Box Keys.
- 50 - Fire Alarm Box Keys, Glass Remover.
- 52 - Fire Alarm Box Break Fronts.
- 200 - Fire Alarm Box Sidewalk Sockets.
- 1 - Fire Alarm Box Pattern, new design, complete.
- 4031 - Fire Alarm Box Component Parts.
- 7 - Fire Alarm/Police Combination Boxes.
- 246 - Component Parts - Engine House Registers.
- 28 - Wiley Cabinets - modified.
- 39 - Miscellaneous Items.

Central Fire Alarm Station

- 25 - Mercury Switches.
- 24 - Insulating Jackets.
- 12 - Silver Contacts, and installed.
- 1 - Dispatch Panel.
- 22 - Miscellaneous Items.

Repaired - Miscellaneous Equipment and/or Components

- 111 - Fire Alarm Boxes rebuilt and tested.
- 114 - Fire Alarm Box Outer Shells rebuilt.
- 161 - Fire Alarm Boxes repaired in the Field.
- 57 - Fire Alarm Box Inner Shells rebuilt.
- 52 - Fire Alarm Box Movement Cases modified.
- 77 - Fire Alarm Box Outer Shell Locks.
- 60 - Fire Alarm Box Sounders rebuilt.
- 72 - Fire Alarm Box Hinges rebuilt.
- 16 - Fire Alarm Crossing Bells.
- 40 - Engine House Relays.
- 170 - Engine House Registers.
- 20 - Pony Relays rebuilt.
- 21 - Automatic Switches rebuilt.
- 45 - Engine House Bells.
- 100 - Register Ink Rollers.

MACHINE SHOP

- 99 - Break Glass Fronts installed in the Field.
- 90 - Component Parts.
- 34 - Register Conversions - one-pen to two-pen.
- 63 - Miscellaneous Items.

Central Fire Alarm Station

- 27 - Miscellaneous Maintenance and Alterations.
- All - Line Relay Magnets regapped.
- All - Line Relay Points regapped.
- All - Tapper, Joker Magnets regapped.
- All - Tapper, Joker Points regapped.
- All - Transfer Switches tightened.
- All - Registers serviced weekly.
- All - Relays, Jokers, Repeaters serviced monthly.

POLICE COMMUNICATION SERVICE

Manufactured - New Equipment and/or Components

- 21 - Police Telephone Units.
- 21 - Police Boxes.
- 21 - Police Box Doors.
- 7 - Police Box Combination Shells.
- 260 - Police Box Component Parts.
- 5 - Police Box Component Parts Drill Jigs.
- 12 - Pilot Lamp Sockets, and installed, Hall of Justice.
- 14 - Sets, Tape Recorder Bushings, Hall of Justice.
- 14 - Miscellaneous Units.

Repaired - Miscellaneous Equipment and/or Components

- 22 - Police Boxes repaired in the field.
- 38 - Telephone Units.
- 48 - Desk Telephones.
- 8 - Operators' Handsets.
- 6 - Police Box Shells.
- 9 - Police Box Doors.
- 11 - Police Telephone Test Sets.
- 13 - Miscellaneous Repairs.
- 60 - Switch Knobs redesignated - Hall of Justice.
- 9 - Message Conveyors - Hall of Justice.

Extensive repairs and modifications to Message Console at Hall of Justice.

MACHINE SHOP
TRAFFIC SIGNAL SERVICE

Manufactured - New Equipment and/or Components

- 27 - Special Controller Door Stop Mechanisms, and installed.
- 64 - 8" Signal Visors.
- 6 - Steel Sidewalk Covers.
- 9 - Controller Cabinets, vented.
- 10 - Special Tools.
- 2 - Special Boxes.
- 12 - Keys, Signal Dial, Eagle.
- 21 - Fuse Block Mounts.
- 40 - Aluminum Spacers.
- 214 - Component Parts.

Repaired - Miscellaneous Equipment and/or Components

- 33 - Traffic Counters.
- 14 - Traffic Treadles repaired in the field.
- 14 - Eagle Controller Brackets.
- 8 - Controller Cabinets.
- 34 - Signal Poles and Bases.
- 36 - 12" Signal Visors.
- 16 - Alterations and repairs to traffic trucks.
- 29 - Component Parts.
- 18 - Miscellaneous Items.
- 26 - Tools, including sharpening.

RADIO COMMUNICATIONS SERVICE

Manufactured - New Equipment and/or Components

- 12 - Radio Chassis and/or Covers.
- 29 - Steel Brackets, as required, for custom installations.
- 11 - Jack Plates.
- 6 - Instrument Panel Complexes.
- 5 - Instrument Adaptations.
- 2 - Antenna. Roof Mounts.
- 4 - Radio Panels-installed Central Fire Alarm Station.
- 147 - Various Component Parts.
- 24 - Miscellaneous Items - Central Fire Alarm Station.
- 11 - Miscellaneous Items - Central Radio Station. .
- 4 - Office Ceilings constructed - Plant Radio Shop.
- 20 - Miscellaneous Items - Plant Radio Shop.

MACHINE SHOP

Repaired - Miscellaneous Equipment and/or Components

- 13 - Mossman Switches.
- 20 - Steel Lockers.
- 30 - Antenna Spring Mounts.
- 11 - Radiological Cabinets altered.
 - 6 - Tape Recorder Brush Heads and Mechanisms.
 - 6 - Meters and Test Instruments.
 - 4 - Civil Defense Kits altered.
 - 9 - Police Car Compartment modifications.
- 16 - Miscellaneous Plant Radio Shop Items of Repair and Maintenance.
- 49 - Miscellaneous Items of Repair - Central Radio Station.
- 14 - Miscellaneous Items of Repair - Central Fire Alarm Station.
- 12 - Microphone Cases.

AIR RAID SIREN SERVICE

Manufactured - New Equipment and/or Components

- 6 - Miscellaneous Parts.
- 1 - Hood.

Repaired - Miscellaneous Equipment and/or Components

- 5 - Air Raid Sirens completely overhauled.
- 1 - Switch Cabinet and Lock Mechanism.

MISCELLANEOUS MACHINE SHOP SERVICE

Manufactured - New Equipment and/or components

- 368 - Identification Key Tags.
- 64 - Items and/or Parts for Plant and Facilities, and installations.
- 40 - Modifications of Items and/or Parts for rolling equipment, and installations.
- 11 - Jigs, Fixtures, and Dies.
 - 4 - Hydraulic Jack Post Straightening Devices.

MACHINE SHOP

- 36 - Safety Glass Shields Cut.
- 1 - Counter and Remote Control Gate - Warehouse.
- 22 - Modifications to Storage Shelves - Warehouse.
- 15 - Signs.
- 32 - Special Tools.
- 55 - Special Parts, miscellaneous.

Repaired - Miscellaneous Equipment and/or Components

- 27 - Pneumatic Tools.
- 7 - Electric Tools and Appliances.
- 113 - Hand Tools.
- 115 - Items for Plant, Grounds, and Office.
- 65 - Items for Plant Rolling Equipment.
- 16 - Hydraulic Tools.
- 49 - Miscellaneous Items.

PARKING METER SERVICE

Manufactured - New Equipment and/or components

- 6650 - Alignment Wedges.
- 985 - Coin Shutter Springs.
- 300 - Parking Meter Post Collars.
- 6 - Dies and Fixtures
- 2342 - Parking Meter Shutter Guide Springs.
- 21 - Parking Meter Flanged Posts.
- 12 - Parking Meter Key Sets.
- 50 - Auxiliary Lock Devices.
- 800 - Parking Meter Component Miscellaneous Parts.

Repaired - Miscellaneous Equipment and/or Components

- 1703 - Parking Meter Cases Overhauled.
- 9900 - Meter Mechanisms repaired and maintained.
- 1139 - Parking Meter Timers.
- 5047 - Parking Meter Posts Serviced.
- 35 - Parking Meter Case Locks.
- 1 - Parking Meter Hydraulic Jack.

Parking Meters - Assembly, Testing, and Installations

- 164 - New Model "K" Parking Meters assembled and installed
Zone 8, Outer Route, City Hall Area.
- 178 - Duncan Miller Parking Meters assembled and installed
Zone 8, Inner Route, City Hall Area.

MACHINE SHOP

The installations of the New Model "K" Parking Meters and the Duncan Miller Parking Meters in the aforementioned locations were made for the purpose of a comparative test of the operation of these two type Parking Meters.

5,127 - New Parking Meter Locks installed, thus completing the installation of New Locks in Parking Meters throughout the City. As of June 30, 1965, the lock changing program has brought about the intended result of reducing looting and vandalism to practically nil, with a consequent substantial increase of revenue to the City.

We are advised by the Director of Finance and Records this revenue increase amounted to \$83,175.86 over the previous year.

* * * * *

Parking Meter Servicemen performed 82,389 field service operations including inspections and tests for Traffic Fines Bureau while patrolling their respective districts on a daily basis and maintaining the 12,600 parking meters in the field.

8,770 telephone complaints on mechanical failures of Parking Meters were received and acted upon.

The following shows material costs incurred through vandalism and traffic damages:

Traffic Damages to Parking Meters....	\$ 10,413.32
Vandalism.....	<u>733.21</u>
Total Material Costs in repair thereof.	\$ <u>11,146.53</u>

* * * * *

MACHINE SHOP

PAINTING - FIRE ALARM SERVICE

	<u>Prepared Primed Enamelled</u>	<u>Lettered & Refinished with decals</u>
<u>Painted In the Field</u>		
Fire Alarm Boxes	532	402
Fire Alarm Box Auxiliary Trips (Broadway Tunnel)	20	20
<u>Painted in the Shop</u>		
Fire Alarm Boxes	160	116
Single Bases	50	20
Inner Shells	110	6
4" Pipes	75	
Fire Alarm Box Doors	36	
Fire Alarm Box Bases	75	
Auxiliary Wiley Cabinets	16	
Auxiliary Wiley Cabinet Doors	8	9
Fire Alarm Box Glass Holders	130	75
Fire Alarm Box Key Cases	46	
Fire Alarm Box Housings	86	
Gamewell Movement Cover Clips	400	
Combination Hood	1	
Auxiliary Trip Covers	16	

PAINTING - POLICE COMMUNICATION SERVICE

<u>Painted In the Field</u>		
Police Boxes	72	56
<u>Painted In the Shop</u>		
Police Boxes	35	28
Back Plates	9	
Police Box Locks	25	
Police Box Key Cases	15	
Combination Shells	6	3

MACHINE SHOP

PAINTING - AIR RAID SIRENS

Prepared
Primed
Emanelled

Painted in the Shop

Air Raid Siren Motors	5
Miscellaneous Air Raid Siren Parts	75

PAINTING - TRAFFIC SIGNAL SERVICE

Painted in the Field

Controllers	309
Vehicular Signals	2358
Walk-Wait Pedestrian Signals	515
Traffic Signal Posts and Poles	885
Pedestrian Pushbutton Signals	141
Traffic Signal Visors	12
Traffic Control Boxes, Broadway Tunnel	6
Backgrounds	27
Back Plates	3
No Left Turn Signals	21
Brackets	11

Painted in the Shop

Vehicular Signals	318
Traffic Signal Doors	18
Walk-Wait Pedestrian Signals	94
Controllers	55
Traffic Signal Visors	408
Post Bells	10
Controller Doors	6
Traffic Cones	26
Traffic Signal Bases	5
Pedestrian Pushbutton Signals	36

PAINTING - RADIO SERVICE

Painted in the Field

Galvanized Plates for Gas Tanks	4
Light Control Boxes	4
Conduits	10
Doors	6

MACHINE SHOP

	<u>Prepared</u> <u>Primed</u> <u>Enamelled</u>
Dehydrator	1
Switch Control Box	1
Garage Doors - Central Radio Station	3
Entrance Doors - Central Radio Station	3
General Doors - Central Radio Station	2
3" Conduits - Central Radio Station	3
 <u>Painted in the Shop</u>	
Intercom Box	1
Brackets for Trucks	5
Electric Plugs	75
Radio Plugs	15
Radio Antenna Springs	33

PAINTING - PARKING METER SERVICE

<u>Painted in the Shop</u>	
Parking Meter Heads	264
Parking Meter Case Doors	39
Parking Meter Coin Doors	29

MISCELLANEOUS PAINTING

Miscellaneous items painted in the Shop in connection with departmental operations	621
---	-----

* * * *

RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1964-65

EMPLOYEE COMPLEMENT

<u>NUMBER OF</u> <u>EMPLOYEES</u>	<u>TITLE</u>	<u>CLASSIFICATION</u>
1	Radio Engineer	5246
1	Sr. Radio Technician	7368
8	Radio Technician	7367

PERCENTAGE ALLOCATED TO VARIOUS DEPARTMENTS AS FOLLOWS:

<u>DEPARTMENT</u>	<u>% 5246</u>	<u>% 7368</u>	<u>% 7367</u>	<u>Hours</u> <u>Overtime</u>
Police	35	49.26	37.54	102
Fire	33	47.96	25.86	87
Dept. of Public Works	5	-	1.82	-
Electricity	15	-	20.19	40
Health	2	-	.31	-
Coroner	-	-	.06	-
Municipal Railway	3	2.78	2.03	5
Water	3	-	1.88	1½
Disaster Corps	3	-	10.06	-
Supervisors	1	-	.23	½
Mayor	-	-	.02	-

Hours Overtime 236

Days (Temporary
Employees) 152

Days (Vacation Relief)

Class 7368 30

Class 7367 63

RADIO DIVISION

The Radio Division engineered and wrote specifications for new radio systems and equipments, installed and maintained equipments presently in use by the various departments, calibrated frequencies, deviation and power in accordance with Federal Communication Commission Rules and Regulations for the following Municipal Departments and Systems:

- Police
- Fire
- Dept. of Public Works
- Municipal Railway
- Water Department
- Disaster Corps
- Housing Authority
- Special Police
- Health
- Coroner
- Citizens Radio
- Local Government Radio System

During the Fiscal Year 1964-65, the technical personnel performed 12,872 maintenance and repair services and 3,690 preventative maintenance tests and operations which include weekly operational tests for the San Francisco Disaster Corps.

Services were provided for various municipal departments as follows:

Police Department:

Transferred forty five (45) mobile radio equipments from obsolete vehicles into replacement vehicles.

Installed one (1) additional new Transmitter-Receiver Mobile Unit.

Relocated one (1) Master Annunciator System.

Completed outstanding projects in the new Hall of Justice:

- Installed Interview Room Recording System and trained personnel in its usage.

- Wrote specifications and maintained liaison with contractors for the expansion and modification of the Public Address System for the Police Auditorium.

RADIO DIVISION

Relocated Secondary Base Station for Richmond Station.

Installed Transmitter-Receiver in Chief Administrative Officer's vehicle.

Prepared Budget estimate for additional service channel to be integrated into present system.

Fire Department

Transferred mobile equipments (transmitter-receiver) into four (4) Fire Apparatus.

Provided and installed fourteen (14) additional mobile radio equipments (transmitter-receiver) in vehicles and apparatus.

Prepared budget estimate for additional equipments for integration into Fire Radio System.

Conducted evaluation of Fire Department Radio System and Operation with American Insurance Association Representative (formerly, Board of Underwriters).

Department of Electricity (Central Fire Alarm Station)

Provided and installed two (2) Recorders for recording telephone communications; added side tone to tapper circuit for recording of alarms on Time Channel of Master Fire Department Tape Recorder.

Underwent successful Federal Communications Commission inspection of all Central Radio Station facilities.

Local Government Radio System

All equipment for the Local Government System has been delivered and installation is in progress.

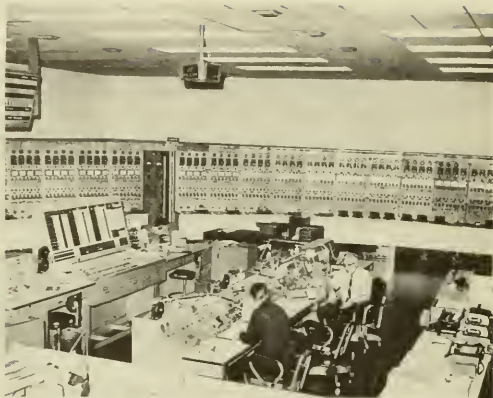
Local Government frequencies have been relinquished by the City of Davis, California and by the County of Butte, California for use by San Francisco.

Completion of the system is scheduled for September 1, 1965.

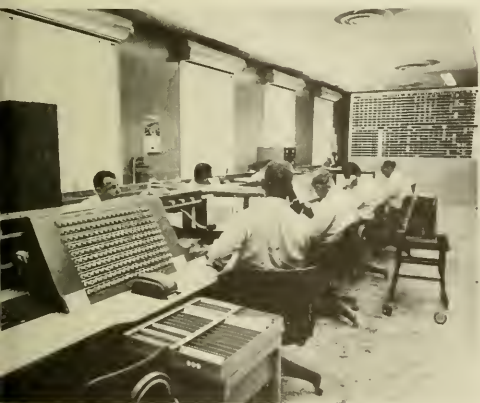
RADIO COMMUNICATION



Radio Shop mobile maintenance operation.



Department of Electricity central fire dispatching headquarters.



Police radio system dispatch headquarters.



Police central teletype section.

RADIO DIVISION

WATER DEPARTMENT (Lake Merced Project)

Prepared specifications, secured bids, awarded contract for one (1) Secondary Base Station with transmitter-receiver, Remote Control and Dispatch Units; one (1) Mobile transmitter-receiver unit and two (2) personalized portable units with battery charger and accessories.

SECURITY RADIO SYSTEM - San Francisco General Hospital

Prepared specifications, received bids and awarded contract for Radio Communications System for the San Francisco General Hospital. The system is licensed under the Federal Communications Commission Special Emergency Service and consists of equipment as follows:

- One (1) Base Station (Transmitter-Receiver)
- One (1) Control Unit
- One (1) Dispatch Unit
- Two (2) Personalized Portable Units (transmitter-receiver, with attendant battery chargers and accessories.)

Completion of the system is estimated for October 1965.

TABULATION OF RADIO SYSTEMS AND COMMUNICATIONS EQUIPMENTS MAINTAINED FOR VARIOUS CITY AND COUNTY DEPARTMENTS BY THE RADIO DIVISION OF THE DEPARTMENT OF ELECTRICITY-FISCAL YEAR 1964-65

CODE													CB-Citizens Band	
P - Police	C - Coroner	PW - Public Works		M - Muni Rwy	Mr - Mayor	SP - Special Police								
F - Fire	E - Electricity	CD - Disaster	LG - Local Govt.	HG - Housing	SE - Spec. Emerg.									
EQUIPMENT		P	H	C	F	PW	LG(E)	M	W	CD	As Noted	Totals		
<u>PRIMARY BASE STATIONS</u>														
Transmitters		9(2)	1SE		4	2	2	1	2(2)	5		26	30	
Receivers		11(2)	1SE		4	2	2	1	2(2)	9		34	38	
Control Consoles		8			4	4		2	5	5		23	23	
Dispatch Units					1							10	10	
Assignment Consoles					2	1		1				2	2	
Antenna Systems		10(2)	1SE		3	1	6			5		27	29	
Remote Cont'l Units		6	2SE		1	2	(1)	1	1			10	11	
Monitor Receivers		4										6	6	
Repeater Panels		2										2	2	
Complaint Consoles														
SECONDARY BASE OR														
CONTROL STATION														
Transmitters		11			17		2		(1)			30	31	
Receivers		24			34		2		(1)			60	61	
Extended Controls		11			14							25	25	
Remote Controls		6			3		4		(2)			13	15	
Antenna Systems		11			17		2		1			31	31	
MICROWAVE SYSTEM		(1)			(1)							2	2	
<u>MOBILE</u>														
Ambulances			14		2							14	14	
Boats					168	35(6)	31(2)	38	69(1)	2	(SP-7)	14	14	
Cars		245	1	3							(Mr-1)	602	611	
Motorcycles (Solo)		90									(HG-1)	90	90	
Motorcycles (3-Whlr.)		79										79	79	
P.A. Systems:														
Mobile		72			16			4		1		93	93	
Portable		12										15	15	
Handi-Talkies		5	2 SE		13 (35)	4CB			(2)			24	61	

TABULATION OF RADIO SYSTEMS AND COMMUNICATIONS EQUIPMENTS MAINTAINED FOR VARIOUS CITY AND COUNTY DEPARTMENTS BY THE RADIO DIVISION OF THE DEPARTMENT OF ELECTRICITY-FISCAL YEAR 1964-65

EQUIPMENT	P	H	C	F	PW	LG(E)	M	W	CD	As Noted		Totals
										Supr.	64-65	
P - Police C - Coroner F - Fire E - Electricity				PW - Public Works CD - Disaster		LG - Local Govt.	Mr - Mayor	SP - Special Police				
						Hg - Housing	SE - Spec. Emerg.					
Fixed Amp. and P.A. Broadcast Receivers (EBS)	8			1	1	1	2	2		Supr.	10	10
Megaphones (Power) Operations Bd. (Pwr) Convertors (Pwr) Peg Bd. (Pwr)	1			1 6 1 1	1						9 6 1 1	9 6 1 1
Intercom Systems: Master Remote				1 8 3 8							1 8 3 8	1 8 3 8
Annunciator Monitor Receivers Battery Chargers Storage Batteries Antenna Systems		1		4 4 4 4		12					56 43 43 41	56 43 43 41
Recorders: Fixed	6			4		(1)					10	11
Portable	21										21	21
Situation Plot Speakers (Extended)	1			1							2	2
Special Investigative Status Bd.	2			30		(20)					30	50
Visual Alert Signal	2		1	1							2	2

Note: 1) Quantities in parenthesis are quantities for the various items of equipment as they are scheduled to exist in 1965-66 and reflect the expansion of existing systems and establishment of new systems with funds currently available.

2) Emergency maintenance and repair of Airport Radio Equipment is provided in quarterly work orders.

COMMUNICATIONS DIVISION (DEPARTMENT OF ELECTRICITY)

SAN FRANCISCO DISASTER CORPS
SUMMARY OF ACTIVITIES
1964 - 1965

ATTACK WARNING SYSTEM (SIRENS)

Serviced, maintained and conducted weekly tests of the City's fifty three (53) Attack Warning Sirens and associated remote control circuits and equipment.

Located and cleared or reported to the Pacific Telephone Company fifty (50) cases of trouble on Sirens or Control Circuits.

Made periodic operational tests and maintained emergency Power Generator, Batteries and associated electrical circuits at the Disaster Corps Emergency Operating Center.

Disconnected Power from thirty five (35) Sirens in order to allow the Pacific Telephone Company technicians to work on the multiple cables without accidentally activating the Sirens.

Line crew removed six (6) pole mounted Sirens to Department of Electricity Shop for required rehabilitation; upon completion of rehabilitation, Sirens were reinstalled by the Line Crew.

Inspected all Sirens for corrosion and/or need for rehabilitation.

RADIOLOGICAL INSTRUMENTS (KITS)

Strategically installed, as follows:

Department of Electricity Operations Office
Department of Electricity Radio Shop
Central Radio Station, Twin Peaks
Central Fire Alarm Station, 1003 Turk Street
Emergency Operating Center (Youth Guidance Center)

The instruments of the five (5) various kits were updated with instruments of more modern design, batteries replaced, and all instruments and equipment checked for correct operation.

MAINTENANCE OF DISASTER CORPS COMMUNICATIONS NETWORKS

Radio technicians made weekly operational tests on Disaster Corps Radio and land-line communications equipments and restored equipment to normal functioning where maintenance or repair was required.

COMMUNICATIONS DIVISION (DEPARTMENT OF ELECTRICITY)

MATCHING FUND ACTIVITIES

- 1) Mobile Communications Van, which is designed to be a mobile communications center that will house the major communications networks for the municipal communications of San Francisco and associated emergency networks for State and Disaster Corps. Matching Fund Application, Local 63-8 was revised in accordance with instruction from the Federal Assistance Division, submitted and approved.

Extensive specifications were written, submitted to the Purchasing Department and bids were released as of July 9, 1965.

- 2) Local 63-6 (Alerting System Maintenance (Sirens)
"Billing" (a complete break-down of all expenditures) for maintenance of the San Francisco Alerting System was submitted for the Fiscal Year 1963-1964 and the City and County of San Francisco was reimbursed \$2,145.50.

- 3) Local 63-7 (Communications Maintenance)
"Billing" (a complete break-down of all expenditures) was submitted for maintenance of the San Francisco Disaster communications for the Fiscal Year 1963-1964 and the City and County of San Francisco was reimbursed \$1,000.00.

- 4) Local 64-6 (Mobile Communications Units for the Director's Vehicle)
"Billing" (a complete break-down of all expenditures) was submitted for communications equipment for the Director of the Disaster Corps mobile and the City and County of San Francisco was reimbursed \$530.00.

Local 64-6 was originally submitted as Local 63-1 which was refused due to lack of radiological protection. The Protection Factor for strategic locations was revised by the Disaster Corps and the Project Application was resubmitted as Local 64-6 and approved.

- 5) Local 64-4 (Estimate of Siren Maintenance for Fiscal Year 1964-65)
The estimate was prepared and submitted August 24, 1964 for the amount of \$6,211.80. The estimate was refused due to the regulation which prohibits maintenance costs in excess of 10% of the original cost of the equipment, \$43,820.

In accordance with the request, a revised application was submitted and approved for \$2,191.00.

COMMUNICATIONS DIVISION (DEPARTMENT OF ELECTRICITY)

"Billing" for Local 64-4 with complete break-down of expenditures for the amount of \$2,081.00 has been submitted to the San Francisco Disaster Corps for processing.

6) Local 64-5 (Estimate Communications Maintenance)

An estimate was prepared August 17, 1965, submitted and approved for the amount of \$1,144.00.

"Billing" for Local 64-5 with complete break-down of expenditures has been submitted to the San Francisco Disaster Corps for processing.

EMERGENCY ASSIGNMENTS FOR PERSONNEL

In order that personnel and emergency information may always be available, a revised Personnel Directory and Emergency Assignment Volume is presently in production which contains information as follows:

- Personnel, Address and Phone Number.
- Emergency Deployment and Assignment for each Employee.
- Emergency Notification Procedure.
- Order of Command.
- Emergency Telephone Directories.

TRAINING PROGRAM FOR FIRE DEPARTMENT PERSONNEL

Training for the operation of the Emergency Control Console which is the Standby Control for the Central Fire Alarm Station, was given to eighteen (18) Fire Officers and men by Radio Personnel from the Radio Division, Department of Electricity.

DISPOSAL OF OBSOLETE EQUIPMENT

With authority granted by the Federal Government (Region 7) and local Governmental Officials, the Radio Equipments formerly used by the Department of Public Works was declared obsolete. Due to suggestions by Officers from Region 7, the equipment was assigned to the Director of the Disaster Corps of Glenn County, California for possible use in their Radio Amateur Civil Emergency Service Organization.

SF
E55
#1

DEPARTMENT OF ELECTRICITY

ANNUAL REPORT

1965 - 1966

DOCUMENTS

SEP 23 1966

SAN FRANCISCO
PUBLIC LIBRARY



August 8, 1966

Mr. Thomas J. Mellon
Chief Administrative Officer
City & County of San Francisco
289, City Hall
San Francisco, California 94102

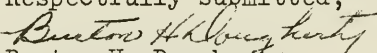
Dear Mr. Mellon:

In compliance with the provisions of Section 20 of the Charter of the City and County of San Francisco, I am submitting the Annual Report of the Department of Electricity for the Fiscal Year 1965-1966.

The accomplishments and activities of the Department for the fiscal year were conducted under the administration of three successive General Managers. With the retirement of Mr. Donald O. Townsend on September 1, 1965; Mr. Doyle L. Smith served as General Manager during the interim period, until March 4, 1966; when the present General Manager was certified under Civil Service procedure.

I thank Mr. Townsend, Mr. Smith and all personnel of our Department for the fine spirit of cooperation which has made possible a smooth transition in the leadership of this Department.

In looking forward to the future I pledge my best efforts and fullest dedication in administering the affairs and activities of the Department of Electricity.

Respectfully submitted,

Burton H. Dougherty
General Manager
Department of Electricity

ANNUAL REPORT
DEPARTMENT OF ELECTRICITY
CITY AND COUNTY OF SAN FRANCISCO
FISCAL YEAR 1965 - 1966

HON. JOHN F. SHELLEY
MAYOR

THOMAS J. MELLON
CHIEF ADMINISTRATIVE OFFICER

BURTON H. DOUGHERTY
GENERAL MANAGER



TABLE OF CONTENTS

LETTER OF TRANSMITTAL.....	FRONT
ADMINISTRATION.....	3
FIRE ALARM OPERATION.....	9
SAFETY COMMITTEE.....	11
ELECTRICAL MAINTENANCE.....	12
MECHANICAL MAINTENANCE.....	26
RADIO COMMUNICATION.....	32
COMMUNICATION DIVISION OF DISASTER CORPS...	40

ILLUSTRATIONS

ORGANIZATION CHART.....	FRONT
ADMINISTRATIVE STAFF.....	2
CHART.....	7
GRAPH.....	8
ELECTRICAL DIVISION - PLANT.....	14
ELECTRICAL DIVISION - TRAFFIC.....	22
MACHINE SHOP.....	28
RADIO COMMUNICATION.....	35

Photography by
courtesy of -
Arnold G. Stenfors
Instrument Maker
Machine Shop

GENERAL MANAGER
DEPT. OF ELECTRICITY
1-1150



▲ This position requested in our 1986-67 budget

☒ Automotive Servicemen } Assigned to this Department
Storekeeper } by Purchase of Supplies

☒ Automotive Serviceman
Storekeeper } Assigned to this Department
by Purchase of Supplies

FUNCTIONS AND RESPONSIBILITIES

Construction, maintenance and operation of the Municipal Fire Alarm System.

Maintenance of Auxiliary Fire Alarm Systems in Public Schools.

Construction and maintenance of the Police Department Emergency Telephone System; Teletype System; Bank Alarm System, and numerous other local systems located within the Hall of Justice.

Maintenance and operation of the City's Traffic Signal System.

Construction and maintenance of Overhead Lines and Underground Cables for the above mentioned systems throughout the City's forty-nine square mile area.

Maintenance of all City-owned Parking Meters.

Planning and development of new Radio Systems. Planning and programming modifications to existing radio systems. Maintaining numerous fleets of mobile Two-Way Radio Telephone Equipment, including Primary Base Stations, Secondary Base Stations, and many other types of electronic equipment.

The Department of Electricity has been designated by ordinance as the Communications Division for the San Francisco Disaster Corps and provides maintenance, periodic functional testing and repair, as required, for the Air Raid Siren Warning System and for various radio warning communications' systems and associated emergency power facilities. Close liaison is maintained with Local, State, and National Civil Defense organizations.

* * * *



ADMINISTRATIVE STAFF



GRACE WENHAM
Secretary to
General Manager



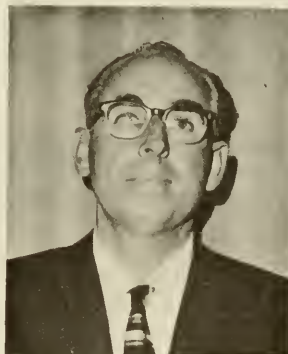
BURTON H. DOUGHERTY
General Manager



ROBERT YUEN
Senior Accountant



JOSEPH A. PETRINI
Machine Shop & Parking
Meter Superintendent



FRANK L. GARKUS
Radio Engineer



DOYLE L. SMITH
Electrical Maintenance
& Construction
Superintendent

ADMINISTRATION OFFICE

The responsibilities of this office are two-fold. There is an operating procedure to maintain minimal control on the flow of standard documents such as requisitions, material received reports, inventory issues, personnel changes, timerolls, billings, etc. The processing of business papers is a necessary function of the Administration Office.

Fiscal control remains the major responsibility of this office. Under the municipal system of accounting, budgeting, annual appropriations, allotments, reconcilements, and statements on the expenditure of funds are required. Daily work reports flow into the Administration Office from the field, plant, and shops. Computations for payroll, job cost, and account distribution are made in this office for the purpose of control, invoicing, forecasting, statistics, analysis, etc.

Recommendations of John F. Forbes & Company, certified public accountants, in connection with the audit made in June 1965 were received and under consideration. Some of the suggestions on departmental procedures outlined in the audit report are already in effect.

The year ending June 30, 1966 shows cost of operations to be within our annual budget with the exception of the Fire Alarm Office in which supplemental appropriations were necessary due to the retirement of one employee, and the prolonged injury of another.

Personnel assigned to Administration include General Manager, Senior Accountant, Accountant, Account Clerk, Clerk-Typist, Senior Clerk-Stenographers, Storekeeper, and Janitor.

REGULATORY AND INSPECTION SERVICES

1965-66

	<u>Estimated Revenues</u>	<u>Actual Revenues</u>
Police Terminal Alarm	\$ 3,696	3,770 (Note 1)
Electrical Installation - in connection with Fire or Police Telegraph and Telephone Signal Systems	4,750	4,856 (Note 2)
Housemoving	300	339 (Note 3)
Loudspeaker on Vehicles	270	155 (Note 4)

(Note 1) For the maintenance and use of each connection to the Police Department Terminal Alarm Panel, including connection and termination @ \$2.75 per month.

(Note 2) For each installation or connection to either or both of the Fire or Police Telegraph and Telephone Signal Systems, the actual cost thereof to the Department of Electricity but not less than a minimum of \$10.00.

(Note 3) Inspection fee to be at cost to the Department of Electricity and may be revised, if necessary, during the fiscal year.

(Note 4) New applicants shall pay to the Department of Electricity an initial testing and inspection fee of \$32.00. Monthly inspection service is set at \$3.50 per month.

STATEMENT OF APPROPRIATED AND OTHER FUNDS
YEAR ENDING JUNE 30, 1966

	<u>Total Allowance</u>	<u>Total Cost</u>	<u>Unused Balance</u>
<u>Administration & Operation:</u>			
Personal Services	\$ 214,175	206,192	7,981
Contractual Services	892	861	31
Material & Supplies	1,085	1,078	7
Equipment	388	384	4
Telephone & Telegraph	7,787	7,555	232
Light, Heat & Power	11,200	10,612	588
<u>Maintenance & Construction:</u>			
Personal Services	997,238	962,434	34,804
Contractual Services	2,932	2,276	656
Material & Supplies:			
Machine Shop	19,001	18,839	162
Radio Communication	16,243	15,828	415
Traffic Signal	40,046	38,234	1,812
Plant (Electrical)	16,314	16,020	294
Equipment	67,731	47,900	19,831
Maint. & Repair of Equipment	7,810	7,807	3
Fuels and Lubricants	4,499	4,499	
Reconstruction & Replacement	157,404	57,518	99,886
Capital Improvements	<u>3,551</u>	<u>2,162</u>	<u>1,389</u>
Total 1965-66 Appropriations	\$ 1,568,294	1,400,199	168,095
<u>Interdepartmental Work Orders:</u>			
Machine Shop	11,648	4,396	7,252
Radio Communication	17,348	12,856	4,492
Traffic Signal Maintenance	3,751	2,677	1,074
Plant (Electrical)	38,530	22,780	15,750
<u>Private Contractors:</u>			
Traffic Signal Relocation	8,607	5,540	3,067
Fire & Police Box Relocation	11,824	2,761	9,063
<u>Continuing Appropriation:</u>			
Installation Fund	<u>13,465</u>	<u>13,180</u>	<u>285</u>
Total Funds Available	\$ <u>1,673,467</u>	<u>1,464,389</u>	<u>209,078</u>

SUMMARY

Budget Allowances	\$ 1,568,294	
Other Funds	<u>105,173</u>	
Total Funds		\$ 1,673,467
Less: Expenditures & Encumbrances	\$ 1,464,389	
Work in Progress (Note 1)	<u>160,605</u>	<u>1,624,994</u>
Unencumbered Balance of Appro.(Note 2)		\$ <u>==48,473</u>

(Note 1) Work in Progress consists of uncompleted work orders, private contractors and specific projects. This amount is carried forward to fiscal year 1966-67. In addition, goods and services from two appropriations totaling \$18,347 cannot be encumbered due to delays beyond the control of management. A request was also made to carry this amount forward.

(Note 2) Unencumbered Balance of Appropriations lapse at the end of fiscal year 1965-66 and return to Unappropriated Surplus on June 30, 1966.

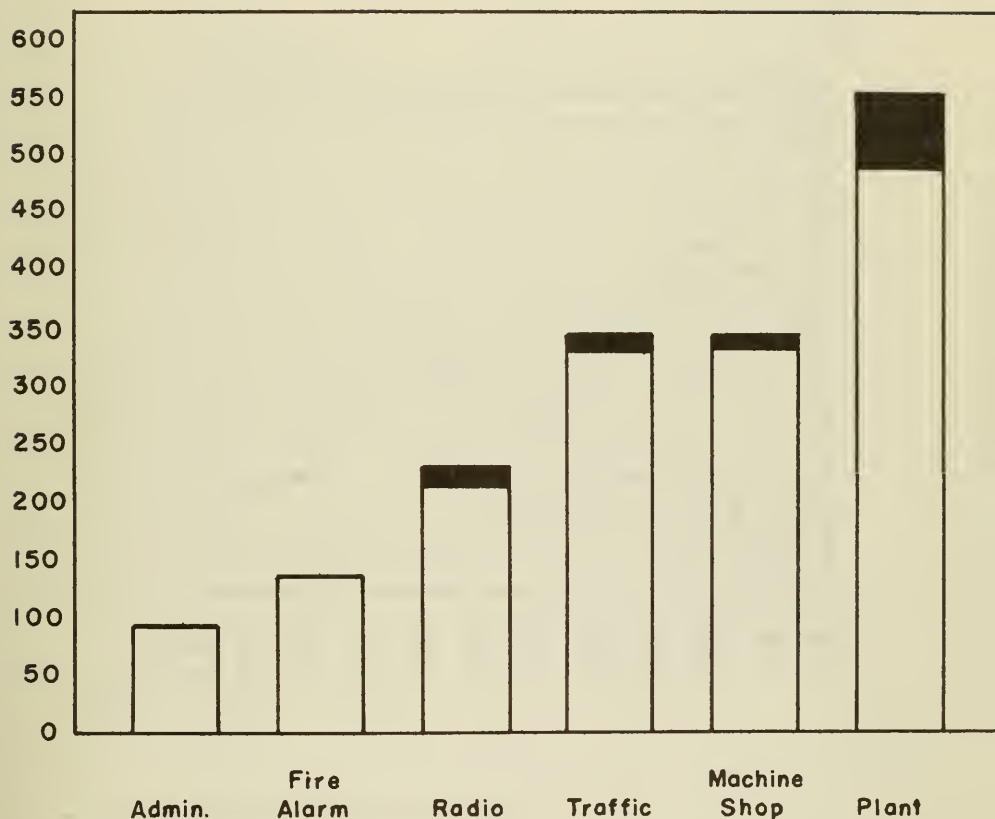
Statistical Highlights

<u>Fiscal Year</u>	<u>Operating Budget</u>	<u>Work Orders</u>	<u>Specific Projects</u>	<u>Total</u>
1959-60	84.5 %	10.0 %	5.5 %	100 %
1960-61	77.0 %	10.5 %	12.5 %	100 %
1961-62	94.9 %	3.4 %	1.7 %	100 %
1962-63	88.5 %	4.6 %	6.9 %	100 %
1963-64	85.4 %	7.0 %	7.6 %	100 %
1964-65	88.5 %	8.8 %	2.7 %	100 %
1965-66	85.8 %	4.4 %	9.8 %	100 %

SOURCE AND USE OF FUNDS

1965 - 1966.

\$ Thousands



Operating Budget

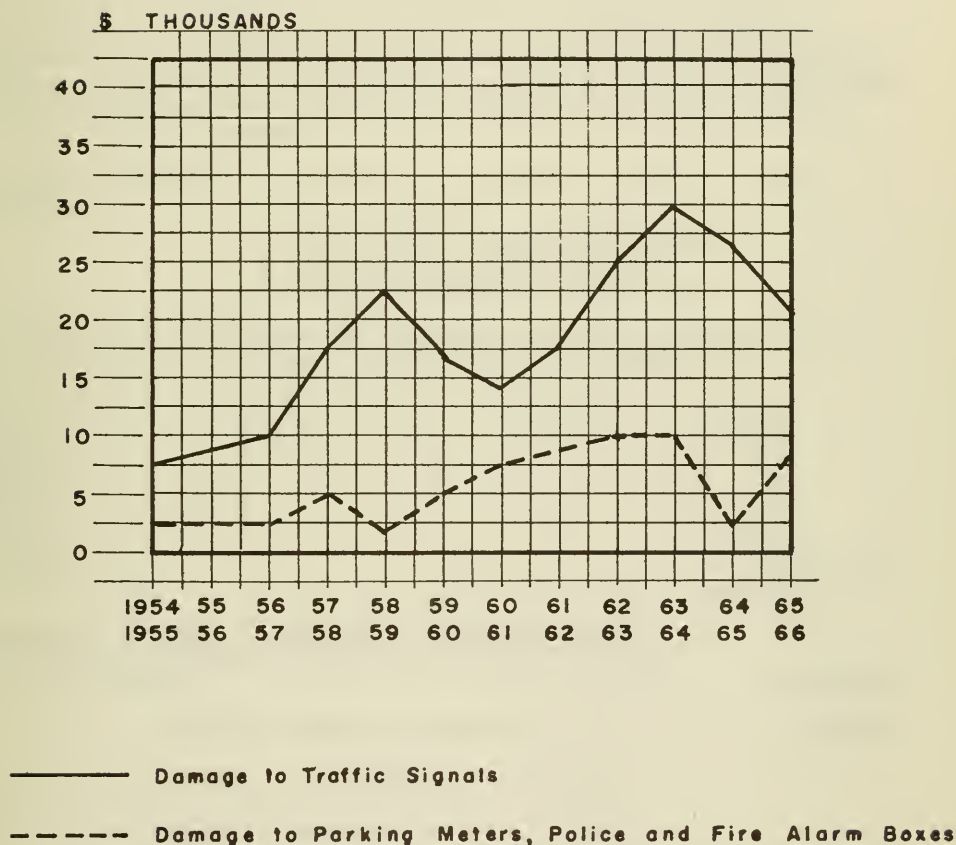


Work Orders, Private Contractors, Inspection Fees.

Total Source - 1.7 million

Total Use - 1.5 million

DAMAGE CLAIMS TWELVE YEARS REVENUE



Job costs pertaining to damages to City property under the jurisdiction of the Department of Electricity are computed and forwarded to responsible parties for collection. In the year ending June 30, 1966 the cost of damage claims amounted to \$28,739.

THEORY OF THE EARTHQUAKE

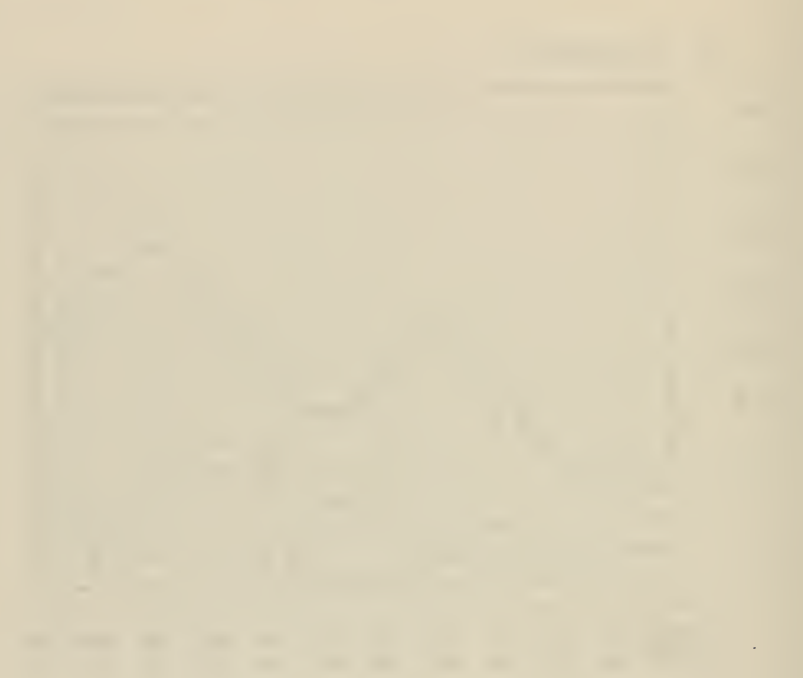


Fig. 1. Seismic intensity vs. distance from the epicenter.

The intensity of an earthquake is a measure of the energy released during the seismic event. It is determined by the amplitude of the seismic waves recorded at a given location. The intensity of an earthquake is a function of the distance from the epicenter, the depth of the focus, and the magnitude of the earthquake.

FIRE ALARM OFFICE

The Fire Alarm Office at 1003 Turk Street includes receipt of alarms and dispatching fire apparatus. It is responsible for the operation of the entire fire alarm telegraph system of san francisco. Fire Alarm personnel also receive trouble complaints and dispatch repairmen in connection with emergency repairs to traffic signals, police and fire communication equipment, test defective circuits, and operate the Civil Defense air raid warning system.

Personnel assigned to the Fire Alarm Office consist of the following:

- 1 - Chief Fire Alarm Dispatcher
- 9 - Fire Alarm Dispatchers
- 4 - Senior Telephone Operators

The following summarizes the activities of the Central Fire Alarm Station for the year ending June 30, 1966:

First Alarms of Fire Received and Transmitted	10,861
Second " " " " " "	152
Third " " " " " "	42
Fourth " " " " " "	10
Fifth " " " " " "	3
Stills " " " " " "	10,549
Directs	916
Special Calls	<u>186</u> 22,719

Secondary Signals transmitted covering Alarms of Fire and routine operational business of the Fire Department

107,537

Total Signals Transmitted

130,256

Total Fire Alarm Boxes in service: 2,024

Total Police Boxes in service: 466

The following summarizes complaints received from the Police Department, other Municipal Agencies and private citizens concerning equipment listed below:

Fire Alarm Wire Trouble	211
Sirens	24
Police	187
Radio	59
Traffic Signals	2,060
Teletype	17
Miscellaneous	429
Registers	234
Outside Locals	<u>7</u>

3,228

FIRE ALARM OFFICE

Fire Alarm Boxes temporarily out of service.... 371

Fire Alarm Boxes out of service for repair,
Relief Boxes in service replacing same..... 71

DEPARTMENT OF ELECTRICITY
SAFETY COMMITTEE.

The Department of Electricity has a Safety Committee, composed of nine members representing each Division of the Department, which meets regularly each month.

The purpose of the Committee is to bring attention to any unsafe conditions existing on the job and make recommendations for their correction.

Special training courses for driver safety, industrial safety, and life-saving, were instituted by the Committee during the past year.

Fourteen (14) items concerning unsafe conditions were reviewed and followed up with corrective recommendations during the same period.

The effectiveness of this Committee is reflected in the excellent safety record of the Department of Electricity.

* * * *



SUMMARY OF WORK PERFORMED BY THE
ELECTRICAL MAINTENANCE DIVISION
=====FISCAL YEAR 1965-66=====

CONSTRUCTION, MAINTENANCE AND REPAIR OF:

- A Equipment and apparatus in connection with the Central Fire Alarm Station, and circuits to fire alarm equipment in 48 Fire Houses.
- B Circuits to and testing of 1,962 Fire Alarm Boxes at 60 day intervals.
- C Auxiliary Fire Alarm Systems in 127 Public Schools.
- D Police Department emergency telephone system, consisting of a two-position switchboard and circuits to 466 Police Call Boxes located on the City streets and 79 locals located in the Hall of Justice and various Bureaus and Police Stations throughout the City.
- E Police teletype system consisting of two teletype transmitters and control consoles located in the Hall of Justice with circuits to 22 printers in the Hall of Justice and various Bureaus and Police Stations throughout the City.
- F Communication, Alarm and Signal Systems, new Hall of Justice.
- G Traffic Signals at 728 intersections.
- H Air Raid Sirens at 53 locations, and associated remote control equipment.
- I Overhead lines and underground cable system embracing the City's 49 square mile area.
- J Maintains related records.

FULL TIME PERSONNEL

1	-	7273	Lineman General Foreman
1	-	7276	Electrician General Foreman
13	-	7338	Lineman
1	-	E-160	Foreman Lineman
3	-	7308	Cable Splicer
4	-	7514	General Laborer
14	-	7345	Electrician
2	-	7238	Electrician Foreman
1	-	5238	Associate Electrical Engineer
1	-		Electrical Maintenance & Construction Supt.
1	-		Electrical Draftsman

ELECTRICAL MAINTENANCE DIVISION

Days worked by temporary personnel in Electrical Division during the fiscal year due to special projects, work orders and vacation relief.

7338 - Lineman	843 days
El60 - Foreman Lineman	268 "
7308 - Cable Splicer	255 "
7514 - Gen.Laborer	376 "
7345 - Electrician	586 "
7238 - Electrician	
Foreman	173 "

FIRE ALARM SYSTEM

Maintained fire alarm equipment in the Central Fire Alarm Station and in 48 Fire Stations; also maintained the communication systems connecting these facilities.

Repaired or replaced in Fire Stations:

- 220 - Registers
- 54 - Bells
- 40 - Relays
- 40 - Automatic Light Switches
- 49 - Intercommunication Systems
- 2 - Fire Alarm Panels

Inspected and tested with the Central Fire Alarm Station once each month, and serviced the auxiliary fire alarm system in 127 Public Schools. Responded to School Auxiliary Fire Alarm Systems 66 times.

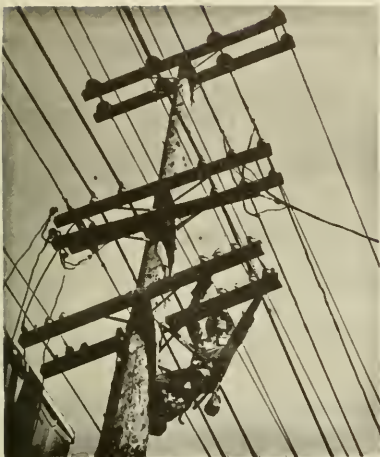
Connected 3 Waterflow and 4 Heat Detector systems in Public schools to Municipal Fire Alarm systems.

Installed 12 new municipal fire boxes, making a total of 1,962 boxes now in service.

Maintained 1,962 Fire Alarm Boxes located on City streets, and 70 associated circuits connecting these fire boxes to the Central Fire Alarm Station.

Fire Alarm Box tests totaling 11,830 were made in accordance with the rules of the National Board of Fire Underwriters.

Replaced 25 old style fire boxes with modern 3-fold non-interfering type fire boxes.



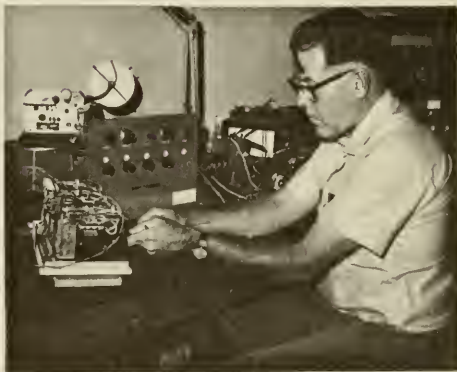
Trouble-shooting overhead
fire alarm lines.



Pulling out damaged fire
alarm cable from underground
duct system.



Splicing out new fire alarm cable
in manhole.



Servicing automatic fire dis-
patching key in electric shop.

ELECTRICAL MAINTENANCE DIVISION

Detail assignment responded to 21 cases of Parking Meter trouble.

Replaced 39 old style fire box shells with new center pull break glass shells.

Converted 27 fire box services from overhead wire to underground cable.

Repaired or replaced 28 fire Alarm Boxes damaged by vehicles.

Relocated 15 fire alarm boxes.

Removed 233 fire alarm boxes to Shop for repairs, and subsequently reinstalled.

Maintained fire alarm system in the Broadway Tunnel for the Department of Public Works.

Cleared 187 cases of trouble on overhead fire alarm circuits.

Responded to complaints and made 25 repairs on outside local fire alarm systems.

Conducted weekly tests of Market Street crossing bells. Repaired bells at 10 locations.

Rebuilt underground cable pot heads at 50 fire boxes.

Replaced 498 feet of ½" conduit to fire alarm boxes on wood poles.

Made repairs, alterations and improvement to overhead fire alarm system at 623 locations involving the installation of 400 cross-arms and 91,150 feet of overhead line wire.

POLICE DEPARTMENT

Repaired and maintained Police Department's switchboard and related equipment at the new Hall of Justice and 79 telephones located within the building, and 462 call boxes located on the City streets, in parks and public buildings, and military and private police agencies.

Serviced and maintained the Police Teletype System; answered 70 complaints.

ELECTRICAL MAINTENANCE DIVISION

Serviced and maintained the following signal systems at the New Hall of Justice:

Status Boards

- 1) Communications
- 2) Traffic Bureau
- 3) Coroner

Local Telephone Systems

- 1) Chief of Police
- 2) City Jail Visitors
- 3) County Jail Visitors

Bank Alarm System

Auxiliary Fire Alarm System

Interview Recording System

Repaired 209 cases of trouble on above systems.

Relocated 4 Police Call Boxes.

Repaired 1 damaged Police Call Box.

Repaired or removed to the Shop for repair 75 Police Call Boxes.

Installed 1 new Police Call Box.

Replaced 290 feet of ½" conduit and wiring to Police Call Boxes mounted on wood poles.

Cleared 95 cases of trouble on overhead Police circuits.

Cleared 78 cases of trouble on underground Police circuits.

Made repairs, alterations and improvements to Police overhead lines at 69 locations, involving the installation of 42 crossarms and 5,210 feet of overhead line wire.

CITY AND COUNTY RADIO SYSTEM

Tested and serviced once each week the two emergency generators and associated power plant equipment at the Central Radio Station, Christmas Tree Point, Twin Peaks.

Maintained the landlines between the Central Radio Station and the control units located in the Hall of Justice, Central Fire Alarm Station, and various other City departments who use the City and County Radio System in their daily operations.

DISASTER CORPS

Serviced, maintained and conducted weekly tests of the City's 53 Air Raid Sirens and associated remote control circuits and equipment. Located and cleared or reported to Pacific Telephone Co. for clearance 46 cases of trouble on Air Raid Sirens or control circuits. Maintained emergency power generators, batteries and associated electrical control equipment at the Civil Defense Control Center.

ELECTRICAL MAINTENANCE DIVISION

Disconnected Sirens on 13 occasions to permit Pacific Telephone and Telegraph Co., to work on cable without setting off sirens.

Inspected all sirens for paint condition.

INSTALLATIONS, RELOCATIONS AND REMOVALS

Central Fire Alarm Station

Installed new read-out numerals on Fire Alarm Box List Lights.

Installed two (2) replacement generators for Fire Alarm Hospital Positions.

Fire Houses

Installed new intercommunication systems in 3 Fire Houses.

Replaced old style wooden Fire Alarm Panels with new dead front style in 2 Fire Houses.

Installed new tapper bells in 7 Fire Houses.

Central Radio Station

Inspected clearance lights on Radio Tower daily, relamping outages as necessary.

Replaced photo-cell units for tower light controls.

Plant Building & Maintenance Yard, 901 Rankin Street

Installed and wired electric heaters in following offices:

Radio Shop	Foreman
"	" Clerk
"	" File Room
"	" Waiting Room
"	Inside Shop
Traffic Shop	Foreman

UNDERGROUND DISTRICTS - NEW SUBDIVISIONS: RELOCATION FOR FREEWAYS, BOULEVARDS, ETC.

Conversion of Department of Electricity facilities from overhead to underground systems in:

Golden Gateway Project	50%
U.G. Dist. 172, Parker, Turk, Masonic Stage I & II	30%
U.G. Dist. 178, Judson Ave., Phelan to Edna	100%

ELECTRICAL MAINTENANCE DIVISION

U.G. Dist. 166, Marina Stage II	90%
U.G. Dist. 175, Bosworth, San Jose to Lippard	100%
U.G. Dist. 166, Marina Stage III and IV	85%
U.G. Dist. 167, Francisco Heights Stage I and II	100%

Relocated Department of Electricity facilities to accommodate Free-way construction:

Southern Freeway:	
Army to 18th Street	100%
Newcomb to Army	100%
Orizaba to Eastmore	60%

Performed special jobs for Fire Alarm Auxiliary Companies and various Contractors, installing conduit, cable, and related equipment for auxiliary connections to City Fire Alarm Boxes.

Pacific Auxiliary Fire Alarm Company:
Maritime Museum, Hyde St. Pier
Mt. Zion Hospital
Ghirardelli Square
Veterans Administration, 42nd and Clement
Chinese Hospital, 835 Jackson St.

Pacific Fire Extinguisher Company:
Federal Building, 450 Golden Gate Ave.
Y.M.C.A., 166 Embarcadero
United California Bank, Montgomery & Calif.
Clift Hotel

Prepared estimates for new Underground Districts and Street Improvement Projects:

Monterey Blvd., Ridgewood to Circular
Gough, California to Washington
Edgeworth, Willard, Belmont, Farnsworth
Fisherman's Wharf Area Stage 1
W/S 12th St., S/L South Van Ness Ave., to N/L
of Howard St.
Marina District, Part II, Stage 1
Sutro Woods Subdivision 1 and 2 (Underground Cable)

Prepared estimates for State Harbor Modernization Program, Service Agreement No. 825 to replace 10 obsolete Fire Alarm Boses with new modern three-fold boxes.

ELECTRICAL MAINTENANCE DIVISION

Repairs, alterations or improvements were made to fire alarm, police and traffic underground cable systems at 510 locations requiring the installation of approximately 40,474 feet of cable and 3,885 feet of underground conduit.

Checked routing and overhead line clearance in connection with 53 House Moving Permits.

Checked 241 Pacific Telephone Company excavation Permits (to determine whether a duct should be provided for the Department of Electricity).

Surveyed and checked Department of Electricity underground facilities and marked locations on the surface of the street in connection with numerous track removal, sewer, water, and other street improvement projects.

Relocation of Department of Electricity facilities for various contractors to accommodate building construction during the fiscal year, amounted to \$9,220.90.

Maintenance services performed on a work order basis for other City Departments amounted to \$13,927.33.

Transferred Department of Electricity overhead lines to new poles at 78 locations as required by Pacific Telephone and Telegraph Co., and Pacific Gas and Electric Company, involving the installation of 75 crossarms and 4,200 feet of line wire.

Relocated Department of Electricity facilities on joint poles at 20 locations in order to provide clearance for cable being installed by Television Signal Corp.

* * * *

ELECTRICAL MAINTENANCE DIVISION
SUMMARY OF TRAFFIC SIGNAL MAINTENANCE
===== FISCAL YEAR 1965-66 =====

The Traffic Signal Maintenance Division responded to a total of 3,628 specific complaints requiring immediate attention. These complaints were received from various governmental agencies, both Municipal and State, private citizens, and from personnel of the Department of Electricity.

In addition planned program of preventative maintenance was followed as the work load allowed.

Signalized Intersections
Maintained as of June 30, 1966:

Fixed Time..... 561
Traffic Actuated..... 167
Total..... 728

Associated Traffic Control
Equipment maintained:

No Left Turn Signs..... 22
Walk-Wait Signals..... 992
Walk-Don't Walk Signals... 78
Vehicle Pressure Detectors 671
Pedestrian Pushbuttons.... 515
Master Controllers..... 18

2,296

Twenty-one (21) new Signal Controlled Intersections were added during the year, as follows:

<u>Intersection</u>	<u>Date</u>
Sunset Blvd., and Judah	July 19, 1965
" " " Lawton	" "
" " " Noriega	" "
" " " Pacheco	" "
" " " Rivera	" "
" " " Taraval	" "
" " " Vicente	" "
" " " Ocean	" "
Geary and Presidio	August 8, 1965
Ocean and Plymouth	" 23, 1965
7th and Townsend	" 24, 1965
Gough & Ellis	" 24, 1965
8th and Townsend	September 23, 1965
3rd and King	" 22, 1965
7th and Kirkham	December 9, 1965
7th & Lawton	" 9, 1965
California and Mason	April 28, 1966
Fillmore & McAllister	" 26, 1966
13th and Folsom	" 25, 1966
Army and Pennsylvania	May 27, 1966
15th and South Van Ness	June 17, 1966

TRAFFIC SIGNAL MAINTENANCE

Complaints By Month

<u>1965</u>		<u>1966</u>	
July.....	339	January.....	324
August.....	341	February.....	275
September.....	326	March.....	260
October.....	362	April.....	246
November.....	340	May.....	249
December.....	343	June.....	223

There were 255 complaints covering damages to signals, using material, in part, as follows:

Ocean and Juniper Serra - Replaced N.E. Signal Head.
Park Presidio and Fulton N.E. - Replaced 2-Way Signal Head.
Oak and Shrader N.W. - Replaced Marbelite Pole 2-Way Signal Heads.
Sutter and Sonsome S.W. - Replaced Steel Pole, 1-Way Signal Head and Walk-Wait Signal.
San Jose & Geneva, East Center Island - Replaced 10 Ft. Steel Pole and 1-Way Signal Head.
25th and 3rd - Replaced Controller Cabinet Base.
Ocean and Plymouth S.W. - Replaced Marbelite Pole.
Alemany to Geneva S.E. - Replaced Controller Cabinet.
Larkin and Turk S.E. - Replaced Controller Cabinet
33rd & Geary N.W. - Replaced Marbelite Pole and 2-Way Signal Heads.
3rd and Oakdale S.E. - Replaced Steel Pole and 2-Way Signal Heads.
16th and Dolores N.E. - Replaced Pedestrian Pushbutton Pole.
Mission and Main N.W. - Replaced 3-Way Signal Heads.
Pine and Sansome N.E. - Replaced Pipe and Wiring.
7th and Folsom S.E. - Replaced damaged Pipe and Wire.
3rd and Carroll S.E. - Replaced 2-Way Signal Heads.
3rd and Evans S.W. - Replaced 2-Way Signal Heads.
Great Highway and Lincoln South Center Island - Replaced Marbelite Pole, Pedestrian Signals, Pushbutton and 2-Way Signal Heads.
Polk and McAllister N.W. - Replaced Controller Cabinet.
4th and Mission N.E. to N.W. - Replaced damaged Conduit and Wire.
Haight and Masonic - Replaced Controller Cabinet.
22nd and Folsom N.W. - Replaced 2-Way Signal Heads.
3rd and Mariposa S.W. - Replaced 10 Ft. Steel Pole.
St. Francis Circle S.W. - Replaced Flasher Head.
Pacific and Franklin S.E. - Replaced 10 Ft. Marbelite Pole and 2-Way Signal Head.



Assembling replacement traffic signal head in shop.



Replacing damaged traffic signal head on 13 foot standard.



Setting timing on traffic signal control equipment in shop.



Replacing contacts in an electronic, traffic actuated, traffic signal controller.

TRAFFIC SIGNAL MAINTENANCE

Franklin and Greenwich N.E. - Replaced 10 Ft. Marbelite pole and remounted Signal Heads.
24th and Potrero S.E. - Replaced 2-Way Signal Heads.
Sutter and Sansome N.W. - Replaced 1-Way Signal Head.
Ocean and Miramar N.W. - Replaced 10 Ft. Marbelite Pole.
19th and Junipero Serra South Center Island - Replaced two 10 Ft. Marbelite Poles and two 2-Way Signal Heads.
Polk and McAllister - Replaced Controller Cabinet.
Fell and Masonic S.W. - Replaced 10 Ft. Marbelite Pole and 2-Way Signal Heads.
Monterey and Diamond S.E. - Replaced 10 Ft. Steel Pole and 2-Way Signal Heads.
Gough and Eddy - Changed Controller Cabinet.
Golden Gate and Scott S.E. - Replaced 10 Ft. Marbelite Pole and 2-Way Signal Heads.
Bayshore and Industrial S.E. - Replaced 10 Ft. Steel Pole and 1-Way Signal Heads.
Fremont and Howard S.E. - Replaced 10 Ft. Steel Pole.
19th and Eucalyptus N.W. - Replaced 10 Ft. Marbelite pole.
Bush and Laguna - Replaced Controller Cabinet.
16th and 3rd North Center Island - Replaced 10 Ft. Steel Pole, and 2-Way Signal Heads.
Lombard and Unisadero N.E. - Replaced 10 Ft. Marbelite Pole and 2-Way Signal Heads.
Fell and Baker S.W. - Replaced 10 Ft. Marbelite Pole and 2-Way Signal Heads.
Valencia and McCoppin N.W. - Replaced 10 Ft. Steel Pole and 2-Way Signal Heads.
Portola and Vicente N.W. - Replaced 10 Ft. Marbelite Pole and Signal Heads.
Junipero Serra and Holloway N.E. - Replaced 10 Ft. Marbelite Pole and 2-Way Signal Heads.

313 - Signal heads were realigned after being struck by high vehicles.

Damaged Material Replaced

23 - Conduits Repaired and Replaced.
31 - 10 Ft. Marbelite Poles.
23 - 10 Ft. Steel Poles.
24 - Controller and/or Base Cabinets.
99 - Signal Heads.
171 - Signal Visors.
23 - Pedestrian Signals.
55 - Lens or Reflectors.
4 - Pedestrian Pushbutton Posts.

TRAFFIC SIGNAL MAINTENANCE

PREVENTATIVE MAINTENANCE

Material Exchanged for Shop Serviced Spares

Fixed Time Controllers	160
Actuated Time Controllers (Dispatchers)	392
Dial Units	70
Coordination Units	58
Relays	347
Pedestrian Timers	38
Master Controllers	6
Flashers	31
Timers	3
Signal Heads	17

Repairs and Service in Field

Signal Heads serviced	1,680
Checked Operation of Signals	909
Controllers Serviced	137
Walk-Wait Signals serviced	364
Masters and Cascade Stations serviced	105
Checked Master A.M. and P.M. Offsets	734
Detector Pads replaced	87
Manual Cords changed	4
Adjustment and Repairs to Clear Trouble	225
Adjusted or Changed Cabinet Locks	14
Detector Frames repaired	4
Detector Pads tightened	10
Checked Timing	204
Changed Timing	55
Changed Offsets	88
Checked Offsets	31
67 Watt Traffic Lamps Changed	11,034
100 " " " "	3
200 " Lamps Changed	7
Neon Walk Tubes Changed	108
" Wait " "	77
" No Left Turn Tubes Changed	3
Repairs to defective wiring	49

TRAFFIC SIGNAL MAINTENANCE

Equipment Repaired and Serviced in Shop

Fixed Time Controllers	196
Traffic Actuated Controllers (Dispatcher)	274
Dial Units	255
Coordination Units	67
Pedestrian Timers	69
Relays	1,130
Timers	27
Signal Heads	377
Master Control Equipment	10
Installed Panel and Wiring in Bare Cabinet	7

Completed 15 Work and Service Orders in the amount of \$13,508.36 for improvements to Signals as requested by the Traffic Engineering Department.

Group relamped and serviced all Signal Heads at 353 Intersections to reduce number of complaints of lights out.

Replaced 87 Pressure Detector Pads at a cost of \$9,926.70, plus labor. We have installed Loop Detectors to compare operation and costs.

Conducted a bi-weekly test of the Freeway Detour Signs controlled from the Central Fire Alarm Station.

Conducted weekly tests of ten (10) Cable Car Pre-empt Intersections, one (1) Cable Car Crossing, and one (1) Turn-table location.

Conducted a monthly test of the Fire Alarm Boxes and the Traffic Signal Pre-empt Circuits in the Broadway Tunnel.

Reset Time Clocks and Program Devices one hour ahead in April and back one hour in October at 33 locations to conform to the California State Daylight Savings Time.

* * * *

MECHANICAL DIVISION
MANUFACTURE, MAINTENANCE &
REPAIR

Under general administrative direction of the General Manager, the Machine Shop and Parking Meter Superintendent supervises all maintenance and repair to all mechanical equipment under the jurisdiction of the Department of Electricity.

This equipment includes 1,962 Fire Alarm Boxes, 466 Police Patrol Boxes, all Instruments, Recorders, etc., at the Central Fire Alarm Station, all mechanical equipment at the Central Radio Station, Hall of Justice Communication's Room, 728 Traffic Signal Controlled Intersections, 12,749 Parking Meters and 53 Air Raid Warning Sirens.

Work is accomplished by the personnel of the Mechanical Division:

- 1 - Machine Shop and Parking Meter Superintendent
- 1 - Instrument Maker Foreman
- 6 - Instrument Makers
- 5 - Maintenance Machinists
- 1 - Parking Meter Serviceman Foreman
- 15 - Parking Meter Servicemen
- 4 - Painters
- 1 - Laborer Sub-Foreman
- 1 - Laborer

The painting and appearance of this equipment is the obligation of this Division and the painting program is continued to the fullest extent with the available personnel.

Fifty-one (51) pieces of gas engine driven equipment - 45 mobile, 6 stationary, are kept in repair by the Purchasing Shops, but are under the control of the Machine Shop and Parking Meter Superintendent.

The maintenance of three Departmental Buildings is directed by the Machine Shop and Parking Meter Superintendent, though the work is accomplished by the Department of Public Works or through contractual services.

MECHANICAL DIVISION

The Mechanical Division works in close harmony with other Departments of the City and with the Plant, Electrical, Traffic, and Radio Divisions of the Department of Electricity to better serve the public.

Manufacturing

Various three-fold non-interfering Fire Alarm Boxes were made to replace obsolete Fire Alarm Boxes in the High Value Districts and new Underground Districts, and old-type Fire Alarm Boxes were rebuilt to modern standards. Replacement parts and/or component parts for Fire Alarm Boxes, Police Patrol Boxes, Registers, Instruments, Parking Meters, were manufactured in the Machine Shop as needed.

149 new Parking Meter installations were made on side streets and off-street parking lots. There are eleven (11) off-street parking lots.

Miscellaneous tool and die and experimental projects were undertaken and completed. Special mechanical fixtures and apparatus were designed and manufactured for the various divisions of this Department to produce functional improvement.

Maintenance and Repair

Preventative maintenance and all necessary repairs were performed on all equipment pertaining to the Department of Electricity.

Painting

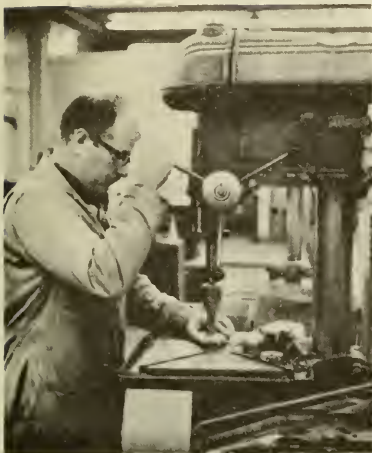
Fire Alarm Boxes, Police Patrol Boxes, Traffic Signals and Controller Air Raid Sirens, Parking Meters, and other miscellaneous equipment were prepared and painted in the Shop and Field.

Other Duties

Data was compiled for the Annual Budget of this Division by the Machine Shop and Parking Meter Superintendent, necessary specifications for machinery and automotive equipment were written and requisitions for equipment and supplies were made. Reports and correspondence related to the Mechanical Division were processed. Records on all mechanical equipment and all parking meter field and shop services were kept.

A close liaison between this Division, the Police Department, Department of Public Works, and the Department of Finance and Records will be maintained to perform a better and more efficient Parking Meter Service.

MACHINE, INSTRUMENT AND PARKING METER SHOP



Counterboring a parking meter coin door lock in the shop.



Replacing a parking meter coin door lock in the field.



Testing a fire alarm register.



Servicing a parking meter in the field.

PERCENT OF PERSONNEL ALLOCATED - VARIOUS DIVISIONS

No.	Class	Title	Fire	Police	Traffic	Radio	Parking Meters	Air Raid & C.D.	Misc.
1	7123	Machine Shop & Parking Meter Supt.	34	12	16	5	25	1	7
1	7234	Instrument Maker Foreman	25	10	15	5	30	1	14
6	7331 7343	Instrument Makers Maintenance Machinists	47	12	20	7	-	1	13
1	7516	Gen. Laborer Sub- Foreman					100		
1	7514	Gen. Laborer					100		
1	7243	Parking Meter Serviceman Foreman					100		
15	7444	Parking Meter Servicemen					100		
4	7346	Painters	2-70	1-25	2-100	1-1	1-20	1-5	1-9
1	B512	Gen. Clk-Typist	5	3	5	1	85		1

Temporary personnel were hired for vacation relief and special projects, as follows:

1 -	7243	Parking Meter Serviceman Foreman	15 days
1	7331	Instrument Maker	74 "
1	7343	Machinist	95 "
2	7346	Painters	16 3/4 "
2	7444	Parking Meter Servicemen	156 "

MECHANICAL DIVISION
SUMMARY OF ACTIVITIES
FISCAL YEAR 1965-66

	<u>Total Number</u>
Manufactured Fire Alarm Boxes and component parts	3,965
Repaired Fire Alarm Boxes and Equipment	1,810
Manufactured Police Call Boxes and component parts	2,112
Repaired Police Telephones and Communications Equipment	285
Manufactured Traffic Signal Visors, Tools, and component parts	626
Repaired Traffic Signal Equipment	237
Miscellaneous Radio Equipment manufactured and repaired	382
Miscellaneous parts manufactured for Plant and Vehicular Equipment	470
Manufactured stamping dies, tools, jigs and fixtures	214
Manufactured miscellaneous Parking Meter parts	6,277
Repaired Parking Meter Cases, Mechanisms and Timers	11,755

Parking Meter Servicemen performed 71,439 field service operations including inspections and tests for Traffic Fines Bureau while patrolling their respective districts on a daily basis and maintaining the 12,749 parking meters in the field.

9,825 telephone complaints on mechanical failures of Parking Meters were received and acted upon.

MECHANICAL DIVISION

The following shows material costs incurred through vandalism and traffic damages:

Traffic Damages to Parking Meters.....	\$ 11,861.26
Vandalism.....	<u>853.80</u>
Total Material Costs in repair thereof.....	\$ <u>12,715.06</u>

PAINTING - FIELD AND SHOP

The following items have been prepared, primed and finish coated.

<u>TRAFFIC SIGNALS</u>	<u>TOTAL NUMBER</u>
Vehicular Signals - field	1965
" " shop	335
Signal Controllers- field	261
Signal Controllers, Doors, Posts, Bases, etc. - shop	301
Walk-Wait Pedestrian Signals - field	397
" " " - shop	163
Signal Posts and Poles - field	900

POLICE COMMUNICATION

Police Call Boxes - field and shop	193
Hall of Justice Consoles	4
Miscellaneous Radio Brackets, Antennae, etc - shop	185

FIRE ALARM SYSTEM

Fire Alarm Boxes - field and shop	1400
Fire Alarm Box Posts, Bases, Inner Shells, Sockets, Movement Housings, etc. - field and shop	1279

PARKING METERS

Parking Meter Cases - shop	491
----------------------------	-----

MISCELLANEOUS PAINTING AT PLANT, 901 RANKIN STREET,
CENTRAL FIRE ALARM STATION, 1003 TURK STREET, AND
CENTRAL RADIO STATION, TWIN PEAKS.

Cabinets, Doors, Shelving, Touch-up, etc.	98
---	----

RADIO COMMUNICATIONS DIVISION
SUMMARY OF ACTIVITIES 1965-66
EMPLOYEE COMPLEMENT

<u>NUMBER OF EMPLOYEES</u>	<u>TITLE</u>	<u>CLASS</u>
1	Radio Engineer	5246
2	Sr. Radio Technicians	7368
8	Radio Technicians	7367

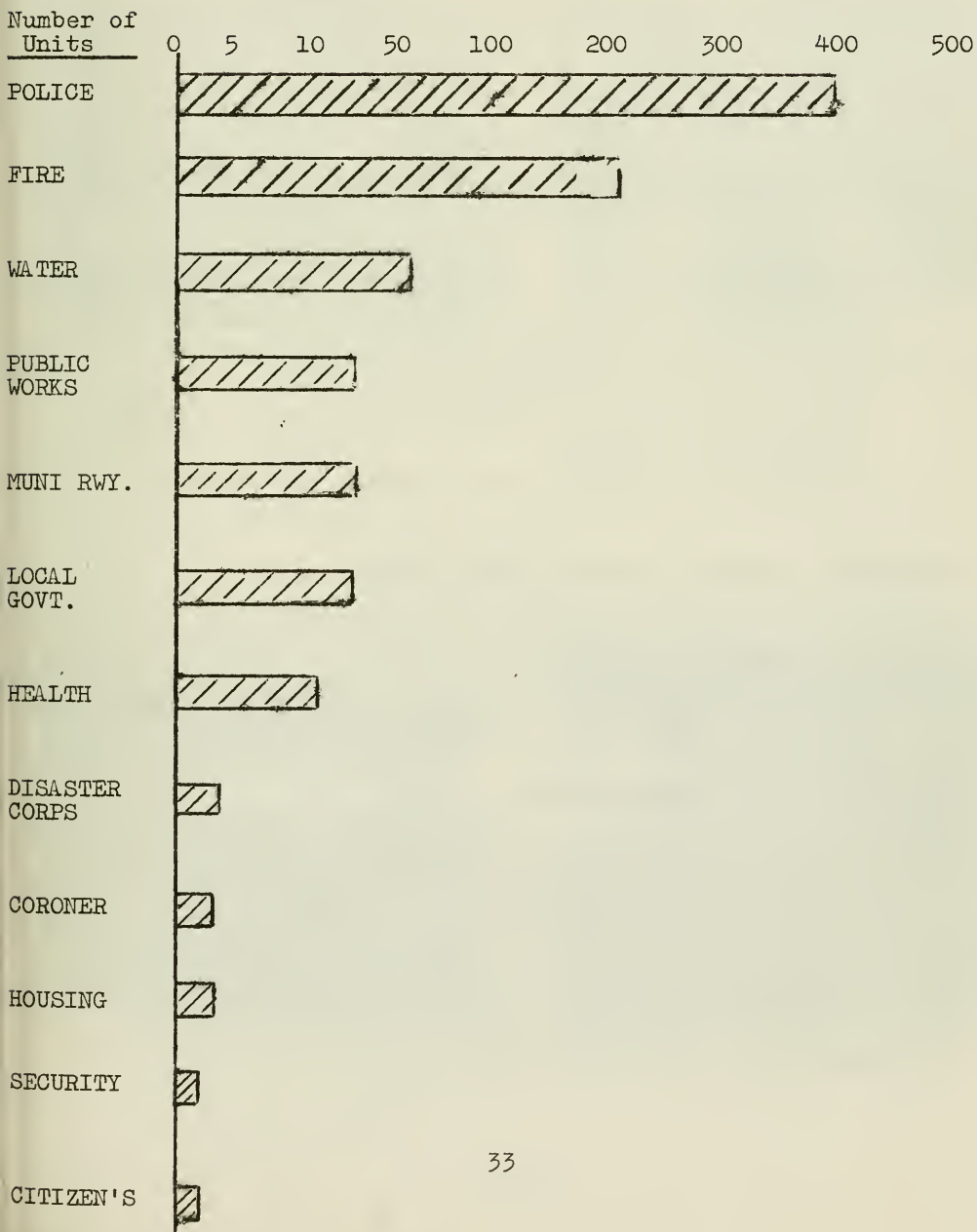
PERCENTAGE OF LABOR ALLOCATED TO VARIOUS DEPARTMENTS AS FOLLOWS:

<u>DEPARTMENT</u>	<u>% 5246</u>	<u>% 7368</u>	<u>% 7367</u>	<u>Hours Overtime</u>
Police	35	33.74	38.54	138
Fire	25	28.61	28.55	82
Dept. of Public Works	5	.11	2.35	14
Electricity	15	33.50	21.84	51
Health	5	.11	.75	
Coroner	3	.11	.02	
Municipal Railway	2	-	2.54	13
Water	2	-	1.97	2
Disaster	5	3.55	2.10	7½
Supervisors	1	.01	.24	
Mayor	-	-	.01	
Miscellaneous	2	.26	1.09	

Hours Overtime	307½
Days (Temporary Employees)	264
Days (Vacation Relief)	
Class 7368	30
Class 7367	90

RADIO COMMUNICATIONS DIVISION

MOBILE TWO-WAY RADIO COMMUNICATIONS EQUIPMENT SERVICED AND MAINTAINED
FISCAL YEAR - 1965-66



RADIO DIVISION

RESPONSIBILITY: Provide, install and maintain public-safety radio communications and associated facilities for various departments of the City and County of San Francisco.

POLICE DEPARTMENT

8,748 radio communications services were performed for the Police Department, including:

Maintenance and repair service at Radio Shop.

Maintenance and repair service at outlying locations.

FCC frequency, deviation and power measurements.

Installation of equipment in replacement vehicles.

Stripped equipment from obsolete vehicles.

Responded to emergency service calls during off-duty hours and/or holidays.

Preventative maintenance and disaster operations.

Tone-Coded Squelch for Police Radio System

A survey and research program by the engineering and technical personnel was carried through to determine the financial requirements for the conversion of present equipment and the providing of additional equipment to make the units function in a coordinated tone-controlled radio system. Specifications will be prepared by the engineering staff during the Fiscal Year 1966-67.

Additional Frequencies Required

Due to the rapid expansion of Police Radio Communications, additional radio frequencies are mandatory. A request was made to and granted by the Federal Communications Commission for an additional Police frequency. Compatibility of the new frequency (45.94 Mc/s) with the frequencies presently in use, proved to be unsatisfactory. An additional request has been made to the Federal Communications Commission for an exchange frequency. Providing that we are successful in being assigned the requested frequency, compatibility tests will be run and if successful, the new frequency will be incorporated into the Police Radio System.

RADIO COMMUNICATION



Police Radio Communications Room
Hall of Justice



Radio Transmitters at Twin Peaks.



Radio Maintenance Shop



Antenna Tower and Radio Equipment
Building - Twin Peaks

RADIO DIVISION

Microwave System

Specifications have been written and are presently being reviewed for a Microwave System, for which funds have been provided, that will serve as an emergency "backup" system in event of loss of the presently used landline controls.

The Microwave System is to duplicate all controls and functions presently controlled by landline and has several additional features, such as security alarms, antenna tower light verification, etc. The system is scheduled for completion during the Fiscal Year 1966-67.

Conversion of Police Radio Receivers

Component parts, required for the conversion of 200 Dumont radio receivers from single frequency receive to dual frequency receive, have been procured. The project is presently in progress.

Replacement Motorcycles

Specifications were written and contract awarded for forty-one (41) dual frequency transmit/dual frequency receive motorcycle radio communications equipment. The 41 units were installed on new replacement motorcycles. The obsolete radio equipment was removed to Radio Shop and the equipment that warrants conversion is in the process of being modified by the Radio Shop personnel.

FIRE DEPARTMENT

1,176 services were performed for the Fire Department during the Fiscal Year 1965-66.

Additional engineering and planning were performed as follows:

42 Portable (personalized) Units for Fire Department:

Specifications were written and contract awarded for forty-two (42) portable (pocket size) two-way radio communications units to be employed at the scene of fire for fire control communications. The units are dual frequency transmit/dual frequency receive, operating on assigned frequencies of 458.55 and 458.65 Mc/s. The units have been received and accepted by the Radio Division and are presently in operation by the Fire Department.

RADIO DIVISION

Microwave System

Specifications have been written for a Microwave System for which funds have been allocated, that will serve as an emergency "backup" system, in event of failure or loss of landline control presently in use.

The Microwave System is designed to duplicate all functions presently controlled by landlines and incorporates several additional functions which were not economically feasible by landline. The system is scheduled for completion during the Fiscal Year 1966-67.

New Fire Department Headquarters

Consulting services were rendered during the planning of construction of the new Fire Department Headquarters by the Radio Engineering staff.

Airport

Installed Fire Two-Way Radio Telephone Unit in airport crash wagon.

DEPARTMENT OF ELECTRICITY

Local Government Radio System

The Department of Electricity Radio Communications System operating in the Local Government Radio Service was completed during the Fiscal Year 1965-66. The System is Federal Communications Commission licensed on the frequencies of 158.76 Mc/s (Base-Mobile Relay) and 155.756 Mc/s (Control-Mobile Relay and Mobile).

The system consists of equipment as follows:

One (1) Base (Mobile Relay)	Central Radio Station
One (1) Base (Control)	Central Fire Alarm Station
One (1) Base (Control)	Department of Electricity
One (1) Base (Mobile Relay)	Bernal Heights
Thirty-three (33) Mobile Units	

The system is provided with "private line" (selective call) which enables headquarters to alert the operator in event he is away from his vehicle.

RADIO DIVISION

Microwave Control for Local Government System

Specifications have been written for a Microwave System that is designed to duplicate all functions, presently controlled by landlines, and therefore serve as "backup" for the present system in event of failure of the landlines. The system is scheduled for completion during the Fiscal Year 1966-67.

PUBLIC WORKS

216 services were performed for the Department of Public Works, which included:

Maintenance and repair at Radio Shop.

Maintenance and repair at outlying locations.

Federal Communications Commission frequency deviation and power measurements.

Preventative maintenance.

Specifications were written and contract awarded for one (1) additional mobile radio communications unit. The unit was installed into a new Department of Public Works vehicle.

MISCELLANEOUS PROJECTS

Supervisors' Public Address System

Specifications were written and contract awarded for the modification of the Public Address System located in the Supervisors' Chambers, City Hall. The project was completed as of November 1, 1965.

Health Department

Radio Communications equipment was removed from two (2) obsolete ambulances and reinstalled into two (2) new ambulances.

Work Orders have been received as follows:

W.O. #5-478 Transfer radio communications equipment from fifty-four (54) obsolete Police vehicles to new replacement vehicles.

W.O. #5-773 Transfer radio communications equipment for twelve (12) Fire apparatus.

RADIO DIVISION

W.O. #4-525 Install radio equipment in fourteen (14) Fire apparatus.

W.O. #4-1095 Transfer radio in Fire apparatus used at Airport.

* * * * *

COMMUNICATIONS DIVISION (DEPARTMENT OF ELECTRICITY)

SAN FRANCISCO DISASTER CORPS SUMMARY OF ACTIVITIES 1965 - 1966

ATTACK WARNING SYSTEM (SIRENS)

The Department of Electricity (Communications Division), serviced, maintained and conducted weekly tests of the City's fifty three (53) Attack Warning Sirens and associated remote control circuits and equipment.

RADIOLOGICAL MONITOR TRAINING

Arrangements were made through the Director of the San Francisco Disaster Corps for the mass training of Department of Electricity personnel. Classes were organized in a manner to prevent depletion of personnel from any department at a given time. Approximately twenty members were offered the training at each class, and four (4) separate classes were held. The training included radiological theory and practical application of actually reading and operating the various meters and equipments that may be required during possible hazardous conditions. Arrangements have been made to repeat the training annually.

MAINTENANCE OF COMMUNICATIONS NETWORKS

The Radio Technicians made weekly operational tests on Disaster Corps radio and landline communications equipment and restored equipment to normal functioning where maintenance or repairs was required.

MATCHING FUND ACTIVITIES

1) Local 63-8 (Mobile Communications Van)

The Mobile Communications Van is presently nearing completion. An extension of time was requested and granted to December 30, 1966. Upon completion, the Van is designed to house all major radio communications employed by the City and County of San Francisco and liaison communications for possible mutual aid.

COMMUNICATIONS DIVISION (DEPARTMENT OF ELECTRICITY)

<u>PROJECT #</u>	<u>PROGRAM</u>	<u>MATCHING FUNDS RECEIVED</u>
2) Local 64-4	Siren Maintenance	\$ 2,032.32
3) " 64-5	Communications Maintenance	578.21
4) " 64-6	Car Radio (Director)	461.12
5) " 65-1	Car Radio (Director)	Pending
6) " 65-7	Siren Maintenance	"
7) " 65-8	Communications Maintenance	"

* * * *

DEPARTMENT of ELECTRICITY

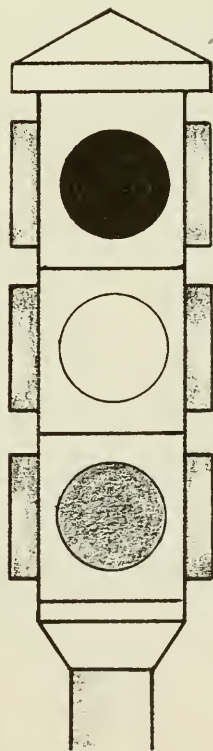
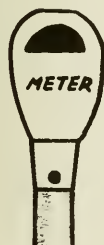


RECEIVED
SEP 27 1967
ELECTRICITY

ANNUAL REPORT

Year
Ending

June 30, 1967



August 4, 1967

Mr. Thomas J. Mellon
Chief Administrative Officer
City and County of San Francisco
289 City Hall
San Francisco, Calif. 94102

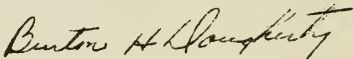
Dear Mr. Mellon:

In compliance with the provisions of Section 20 of the Charter of the City and County of San Francisco, I am submitting the Annual Report of the Department of Electricity for the Fiscal Year 1966-1967.

I wish to thank all of our personnel for their increased diligence, efficiency and hard work during this past year. We are continuing to adjust to an increasing work load and endeavoring to provide the same high standard of service and maintenance with a decrease of five per cent in the number of personnel hours available for work of the Department. This decrease resulted from the reduction from eight to seven hours in the work day for certain electrical crafts and painters, without an increase in the number of employees.

I appreciate and thank you and your staff for the cooperation and help afforded me in my first full fiscal year as General Manager of the Department of Electricity.

Respectfully submitted,


BURTON H. DOUGHERTY
General Manager
Department of Electricity

A N N U A L R E P O R T
D E P A R T M E N T O F E L E C T R I C I T Y
C I T Y A N D C O U N T Y O F S A N F R A N C I S C O
F I S C A L Y E A R 1 9 6 6 - 1 9 6 7

H O N . J O H N F . S H E L L E Y
M A Y O R

T H O M A S J . M E L L O N
C H I E F A D M I N I S T R A T I V E O F F I C E R

B U R T O N H . D O U G H E R T Y
G E N E R A L M A N A G E R

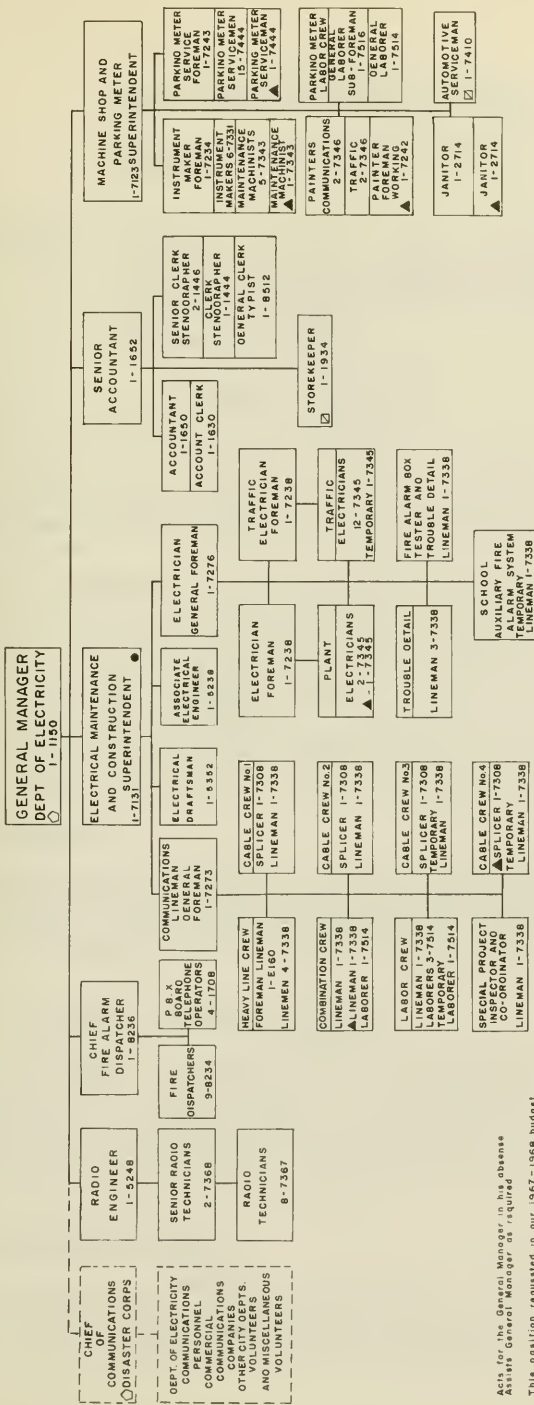
TABLE OF CONTENTS

LETTER OF TRANSMITTAL.....	FRONT
RADIO COMMUNICATION.....	1
COMMUNICATION DIVISION OF DISASTER CORPS..	9
MECHANICAL MAINTENANCE.....	10
ELECTRICAL MAINTENANCE.....	17
SAFETY COMMITTEE.....	30
FIRE ALARM OPERATION.....	32
ADMINISTRATION.....	34

ILLUSTRATIONS

ORGANIZATION CHART.....	FRONT
RADIO COMMUNICATION.....	5
MACHINE SHOP.....	13
ELECTRICAL DIVISION - PLANT.....	19
ELECTRICAL DIVISION - TRAFFIC.....	26
CHART.....	37
GRAPH.....	38
ADMINISTRATIVE STAFF.....	39

GENERAL ORGANIZATION CHART FOR THE DEPARTMENT OF ELECTRICITY



Acts for the General Manager in his absence
Assists General Manager as required

Assists General Manager as required

Table 6-6-7 continued

☒ Automotive service man } Assigned to this Department

<input checked="" type="checkbox"/> Automotive service man	Assigned to this Department
--	-----------------------------

General Manager functions as Chief of Communications Division under Disaster Control Operations

Division under Disaster Cores Operations



RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1966-67

Responsibility: Design, provide, install and maintain Public Safety and other comparable Radio Communications Systems, equipments and associated facilities for various departments of the City and County of San Francisco.

POLICE DEPARTMENT

The following services were performed for the Police Department:

- Maintenance and repair service at the Radio Shop.
- Maintenance and repair service at various outlying locations.
- F.C.C. frequency, deviation and power measurements.
- Installation of equipment in replacement vehicles.
- Removal of radio equipment from obsolete vehicles.
- Responded to emergency service calls during off-duty hours and/or holidays.
- Performed preventative maintenance services at various locations for Disaster Corps communications equipment.

Microwave System

Due to the lowest bid being in excess of the appropriation, the Purchase Order was delayed. A supplemental appropriation to cover the deficit was approved and a Purchase Order was issued. The system is scheduled for completion during the Fiscal Year 1967-68.

Base Radio Station - Bernal Heights

To relieve channel loading in the Police Radio System, funds were made available for the purchase of new Base Station equipment. Specifications were written and a purchase order was made out to General Electric on the basis of low bid. The frequency of operation will be 45.14 Mc. The system is scheduled for completion during the Fiscal Year 1967-68.

Tone-Coded Squelch System

Specifications were written to provide a tone-coded squelch system for Police Base/Mobile operation. A contract was awarded for the manufacture of the equipment. It is in the process of installation by Radio Shop personnel.

RADIO DIVISION

Service Channel Modification

Modification in all Police vehicles including motorcycles approximately 50% complete. This channel was installed in ten (10) District Base Stations.

Police Command Car and New Central Station

Liaison meetings were held with the Police Planning and Research Division prior to designing radio communications systems for the two projects.

DIRECTION FINDER

The Radio Shop investigated and designed a solid state Direction Finder. One prototype was constructed and successfully tested.

FIRE DEPARTMENT

Fire Department Headquarters to New Building

The transfer of Radio Communications equipment from City Hall to the new headquarters building, 260 Golden Gate Avenue was planned and executed. Base Station KBL 514 license was modified and posted, as per F.C.C. rules. Communications equipment installed under building contract was tested and punch list of deficiencies prepared.

New 28 Engine

Equipment was removed and later reinstalled while this building was rebuilt.

Fire Command Car

Prepared Design Specifications, as follows:

- 1) Radio Communications System.
- 2) Interior Design (Model).
- 3) Woodwork.
- 4) Electrical.
- 5) Complete set of drawings.

The project is scheduled for completion September 1, 1967.

RADIO DIVISION

Aerial Intercom

Prototype of future ladder intercom was installed on Truck Co. No. 3, and approved by the Fire Department. Equipment for eleven (11) more aerial ladders is presently on order.

Modifications

Forty-two Handie-Talkies were modified to conform to new Federal Communications Commission narrow band requirements.

LOCAL GOVERNMENT RADIO SYSTEM (DEPARTMENT OF ELECTRICITY)

The Public Pound (Society for Prevention of Cruelty to Animals) was licensed by the Federal Communications Commission as a control station, carrying the call sign KVE 68. Prior to this date the SPCA had been operating on a Police channel. A revised operating procedure was prepared and briefing meetings were held for SPCA and Department of Electricity personnel.

The system presently consists of equipment as follows:

- 1 - Base Mobile Relay (Central Radio Station)
- 1 - Base Mobile Relay (Bernal Heights)
- 3 - Control Stations (Department of Electricity, Central Fire Alarm Station, Society for Prevention of Cruelty to Animals)
- 2 - Remote Controls (Department of Electricity, Central Fire Alarm Station)
- 2 - Dispatch Units (Operations, Traffic)
- 33 - Transmitter/Receiver Units (Department of Electricity)
- 7 - Transmitter/Receiver Units (Society for Prevention of Cruelty to Animals)

Services were performed by Radio Division personnel for various departments.

Mobile Two-Way Radio Units Repaired in Radio Shop:

- 1344 Police Department (Cars)
- 180 " " (Motorcycles)
- 432 Fire Department (Cars)
- 67 Local Government (Cars and Trucks)

RADIO DIVISION

- 120 Municipal Railway (Cars and Trucks)
- 79 Department of Public Works (Cars)
- 228 Water Department (Cars)
- 9 Police Department (Portable Units)
- 62 Fire Department (Portable Units)

Mobile Two-Way Radio Installations:

- 67 Police Cars
- 4 Patrol Wagons
- 7 Conversions from Undercover to Station Car
- 7 Fire Department (Cars)
- 7 Fire Department (Heavy Apparatus)
- 13 Department of Public Works, consisting of 9 Cars and 4 Trucks
- 4 Ambulances
- 10 Municipal Railway Coaches (We worked in cooperation with Municipal Railway Shop employees in this project)

Radio Shop

- 600 Miscellaneous Electronic Repairs
- 1140 Frequency, Deviation and Power Calibrations (Vehicles)
- 185 Frequency, Deviation and Power Calibrations (Motorcycles)
- 60 Frequency, Deviation and Power Calibrations (Base Radio Stations)

Work Orders

Work Orders have been received during the Fiscal Year 1966-67 as follows:

- Work Order 6-468 Provide and install 35 two-way motorcycle units.
- Work Order 6-875 Install two-way equipment in 15 Fire Department vehicles.

RADIO COMMUNICATION



Emergency Mobile Communications Van designed and outfitted by the Radio Shop for the Disaster Corps



Three Solos and a District Car in the Radio Shop



Federal Communications Inspection being performed



Tuning up two-way radio communications equipment

RADIO DIVISION

- Work Order 6-1447) Provide and install two-way radio communications
6-1448) equipment in two new Department of Public Works
(Sewer Department) vehicles.
- Work Order 6-1827 (1) Provide, design and install radio system and
battery charging system in Police Command Bus.
(2) Provide, design and install electric wiring
system for Police Command Bus.
(3) Provide and install one (1) radio communica-
tions unit in Police Communications Bus.
- Work Order 6-2027 Emergency repair and maintenance of radio and
electronic equipment for the San Francisco
International Airport.
- Work Order 6-2045 Remove radio equipment from two (2) obsolete
ambulances and reinstall in new vehicles.
- Work Order 6-2061 Provide and install one (1) dual frequency radio
communications unit (Police frequencies) and one
(1) monitor receiver (Fire frequency) in new
Disaster Corps vehicle.
- Work Order 6-2277 Remove radio communications equipment from
Department of Public Works vehicle and reinstall
in new vehicle.
- Work Order 7-003 Provide and install eighteen (18) solo-type
two-way radio units; thirteen (13) three-wheeler
type radio units and five (5) three-wheeler
control cables in Police motorcycles.

* * * *

RADIO COMMUNICATIONS DIVISION
SUMMARY OF ACTIVITIES 1966-67
EMPLOYEE COMPLEMENT

<u>NUMBER OF</u> <u>EMPLOYEES</u>	<u>TITLE</u>	<u>CLASS</u>
1	Radio Engineer	5246
2	Sr. Radio Technicians	7368
8	Radio Technicians	7367

PERCENTAGE OF LABOR ALLOCATED

<u>DEPARTMENT</u>	<u>% 5246</u>	<u>% 7368</u>	<u>% 7367</u>	<u>Hours</u> <u>Overtime</u>
Police	25	53.03	49.59	120
Fire	35	46.23	28.06	111
Dept. of Public Works	5	.22	.99	
Electricity	15	.52	14.57	2½
Health	4	-	.44	
Coroner	2	-	.11	1½
Municipal Railway	4	-	2.25	6
Water	4	-	2.30	
Disaster	3	-	.42	
Supervisors	1	-	.13	
Mayor	-	-	.10	
Miscellaneous	2	-	1.04	

Hours Overtime	241
Days (Temporary Employees)	414
Days (Vacation Relief)	
Class 7368	30
Class 7367	105

RADIO COMMUNICATIONS DIVISION

MOBILE TWO-WAY RADIO COMMUNICATIONS EQUIPMENT SERVICED AND MAINTAINED
FISCAL YEAR - 1966-67

<u>Service</u>	<u>No. Units</u>	0	5	20	50	100	200	300	400	500
POLICE	459									
FIRE	207									
WATER	82									
MUNI RWY.	57									
PUBLIC WORKS	43									
LOCAL GOVT.	33									
HEALTH	17									
SPECIAL POLICE (P)**	8									
SPCA (LG)*	8									
CORONER (P)**	3									
HOUSING (P)**	2									
DISASTER	2									
MAYOR (P)**	2									
CHIEF ADMIN. OFFICER (P)**	1									

* Local Government

** Police Radio System

COMMUNICATIONS DIVISION (DEPARTMENT OF ELECTRICITY
SAN FRANCISCO DISASTER CORPS
SUMMARY OF ACTIVITIES
1966-1967

Communications Van

Specifications for the interior cabinetry have been written, submitted to the Purchaser of Supplies, and contract awarded. It is anticipated that this phase of the project will be completed during Fiscal Year 1967-68.

Maintenance of Communications Network

Radio Technicians make periodic operational tests for Disaster Corps communications equipment.

Radiological Monitor Training

Refresher training in the operation of Radiological Monitoring was offered to the personnel of the Department of Electricity by personnel of the San Francisco Disaster Corps.

* * * * *

MECHANICAL DIVISION
MANUFACTURE, MAINTENANCE &
REPAIR

Under general administrative direction of the General Manager, the Machine Shop and Parking Meter Superintendent directs and supervises all maintenance and repair to all mechanical equipment under the jurisdiction of the Department of Electricity.

This equipment includes 1,962 Fire Alarm Boxes, 466 Police Patrol Boxes, all Instruments, Recorders, etc., at the Central Fire Alarm Station, all mechanical equipment at the Central Radio Station, Hall of Justice Communication's Room, 728 Traffic Signal Controlled Intersections, 12,797 Parking Meters and 53 Air Raid Warning Sirens.

Work is accomplished by the personnel of the Mechanical Division:

- 1 - Machine Shop and Parking Meter Superintendent
- 1 - Instrument Maker Foreman
- 6 - Instrument Makers
- 5 - Maintenance Machinists
- 1 - Parking Meter Serviceman Foreman
- 15 - Parking Meter Servicemen
- 4 - Painters
- 1 - Laborer Sub-Foreman
- 1 - Laborer
- 1 - Janitor
- 1 - Automotive Serviceman

The painting and appearance of this equipment is the obligation of this Division and the painting program is continued to the fullest extent with the available personnel. We requested one working Painter Foreman in the 1967-1968 Budget; the request was denied, and as a result we cannot paint signals as often as they should be done.

Fifty-one (51) pieces of gas engine driven equipment - 45 mobile, 6 stationary, are kept in repair by the Purchasing Shops, but are under the control of the Machine Shop and Parking Meter Superintendent. The servicing of this equipment is done by 1 - Automotive Serviceman at 901 Rankin Street.

The maintenance of three Departmental Buildings is directed by the Machine Shop and Parking Meter Superintendent, though the work is accomplished by the Department of Public Works or through contractual services. An additional janitor has been requested in each budget for the past four years; the requests have been

MECHANICAL DIVISION

denied each time and as a result we cannot have the cleanliness and sanitation that is necessary.

The Mechanical Division works in close harmony with the Plant, Electrical, Traffic, and Radio Divisions of the Department of Electricity, and with other Departments of the City to better serve the public.

Manufacturing

Various three-fold non-interfering Fire Alarm Boxes were made to replace obsolete Fire Alarm Boxes in the High Value Districts and new Underground Districts, and old-type Fire Alarm Boxes were rebuilt to modern standards. Replacement parts and/or component parts for Fire Alarm Boxes, Police Patrol Boxes, Registers, Instruments, Parking Meters, were manufactured in the Machine Shop as needed.

Several new Parking Meter installations were made on side streets with more installations projected for the future. There are 11 off-street parking lots with a total of 295 Parking Meters. We requested a Parking Meter Serviceman and a Machinist in the 1967-1968 budget and the request was denied. This will hamper some of the preventative and regular maintenance in the future. The work load is too great for the number of employees we now have.

Miscellaneous tool and die and experimental projects were undertaken and completed. Special mechanical fixtures and apparatus were designed and manufactured for the various divisions of this Department to produce functional improvement.

Maintenance and Repair

We performed as much preventative maintenance as possible with the available personnel and all necessary repairs were performed on all equipment pertaining to the Department of Electricity.

Painting

Fire Alarm Boxes, Police Patrol Boxes, Traffic Signals and Controllers, Air Raid Sirens, Parking Meters, and other miscellaneous equipment were prepared and painted in the Shop and Field.

Other Duties

Data was compiled for the Annual Budget of this Division by the Machine Shop and Parking Meter Superintendent, necessary specifications for machinery and automotive equipment were written and requisitions for equipment and supplies were made. Reports and correspondence related to the Mechanical Division were processed.

MECHANICAL DIVISION

Records on all mechanical equipment and all parking meter field and shop services were kept.

A close liaison between this Division, the Police Department, Department of Public Works, and the Department of Finance and Records will be maintained to perform a better and more efficient Parking Meter Service for all concerned.

* * * * *

PERCENT OF PERSONNEL ALLOCATED -- VARIOUS DIVISIONS

Temporary personnel were hired for vacation relief and special projects, as follows:

1 - 7243	Parking Meter Serviceman Foreman	15 days
1 - 7331	Instrument Maker	"
2 - 7343	Machinists	163
2 - 7346	Painters	111
2 - 7444	Parking Meter Servicemen	"
		139

MECHANICAL DIVISION
SUMMARY OF ACTIVITIES
FISCAL YEAR 1966-67

	<u>Total Number</u>
Manufactured Fire Alarm and Component Parts	4,983
Repaired Fire Alarm Boxes and related Equipment	4,543
Manufactured Police Call Boxes and Component Parts	1,558
Repaired Police Telephones and related Communications Equipment	273
Manufactured Traffic Signal Component Parts and Tools	3,885
Repaired Traffic Signal Components and related Equipment	230
Manufactured and Repaired Miscellaneous Radio Equipment Items	700
Miscellaneous Items Manufactured and Repaired for Plant and Vehicular Equipment	2,166
Manufactured Jigs, Fixtures, Tools, Stamping Dies and Patterns for Machine Shop Production and Maintenance Work	206
Manufactured Miscellaneous Parking Meter Parts	21,384
Repaired Parking Meter Cases, Mechanisms, Timers and Miscellaneous Parts	16,415

All Registers serviced weekly; all Tappers, Jokers and Repeaters serviced monthly at the Central Fire Alarm Station, 1003 Turk Street.

Parking Meter Servicemen performed 92,771 field service operations including inspections and tests for Traffic Fines Bureau while patrolling their respective districts on a daily basis and maintaining the 12,797 parking meters in the field. Included in the 92,771 field service operations is the Parking Meter Laborers' time in the straightening, resetting, replacing, installing, relocating and removing Parking Meter Posts in the amount of 5,150 operations.

10,204 telephone complaints on mechanical failures of Parking Meters were received and acted upon.

MECHANICAL DIVISION

The following shows material costs incurred through vandalism and traffic damages:

Traffic Damages to Parking Meters.....	\$ 11,066.49
Vandalism.....	<u>2,016.78</u>
	\$ <u>13,083.27</u>

PAINTING - FIELD AND SHOP

The following items have been prepared, primed and finish coated:

TRAFFIC SIGNALS

TOTAL NUMBER

Vehicular Signals - Field	1293
" " - Shop	198
Signal Controllers - Field	201
Signal Controllers, Doors, Posts, Bases, etc.- Shop	352
Walk-Wait Pedestrian Signals - Field	549
" " " " - Shop	81
Signal Posts, Poles, etc., - Field	365

POLICE COMMUNICATION

Police Call Boxes - Field and Shop	305
Miscellaneous items - Shop	38

FIRE ALARM SYSTEM

Fire Alarm Boxes - Field and Shop	1672
Fire Alarm Box Posts, Bases, Inner Shells, Sockets, Movement Housings, etc. - Field and Shop	2653

PARKING METERS

Parking Meter Cases - Shop	455
----------------------------	-----

MISCELLANEOUS PAINTING AT PLANT, 901 RANKIN ST.,
CENTRAL FIRE ALARM STATION, 1003 TURK STREET, AND
CENTRAL RADIO STATION, TWIN PEAKS

Cabinets, Siren Parts, Ladders (oiled-shellaced), Brackets, Radio Equipment, Parts, Aluminum Strips, Redwood Moulding, touch-up, etc.	2090
---	------

SUMMARY OF WORK PERFORMED BY THE
ELECTRICAL MAINTENANCE DIVISION
===== FISCAL YEAR 1966-67 =====

CONSTRUCTION, MAINTENANCE AND REPAIR OF:

- A Equipment and apparatus in connection with Central Fire Alarm Station, and circuits to fire alarm equipment in 48 Fire Houses.
- B Circuits to and testing of 1,962 Fire Alarm Boxes at 60 day intervals and test of 62 Pacific [REDACTED] *Fire Extinguisher Fire Alarm Boxes.*
- C Auxiliary Fire Alarm Systems in 127 Public Schools.
- D Police Department emergency telephone system, consisting of a two-position switchboard and circuits to 466 Police Call Boxes located on the City streets and 79 locals located in the Hall of Justice and various Bureaus and Police Stations throughout the City.
- E Police teletype system consisting of two teletype transmitters and control consoles located in the Hall of Justice with circuits to 22 printers in the Hall of Justice and various Bureaus and Police Stations throughout the City.
- F Communication, Alarm and Signal Systems, new Hall of Justice.
- G Traffic Signals at 746 intersections.
- H Air Raid Sirens at 53 locations and associated remote control equipment.
- I Overhead lines and underground cable system embracing the City's 49 square mile area.
- J Maintains related records.

FULL TIME PERSONNEL

- 1 - 7273 Lineman General Foreman
- 1 - 7276 Electrician General Foreman
- 13 - 7338 Lineman
- 1 - E-160 Foreman Lineman
- 3 - 7308 Cable Splicer
- 4 - 7514 General Laborer
- 14 - 7345 Electrician
- 2 - 7238 Electrician Foreman
- 1 - 5238 Associate Electrical Engineer
- 1 - Electrical Maintenance & Construction Supt.
- 1 - Electrical Draftsman

ELECTRICAL MAINTENANCE DIVISION

Days worked by temporary personnel in Electrical Division during the fiscal year due to special projects, work orders and vacation relief.

7338 - Lineman	1,092 days
E160 - Foreman Lineman	268 "
7308 - Cable Splicer	177 "
7514 - Gen. Laborer	166 "
7345 - Electrician	538 "
7238 - Electrician Foreman	268 "

FIRE ALARM SYSTEM

Maintained fire alarm equipment in the Central Fire Alarm Station and in 48 Fire Stations; also maintained the communication systems connecting these facilities.

Repaired or replaced in Fire Stations:

119 - Registers
54 - Bells
30 - Relays
51 - Automatic Light Switches
37 - Intercommunication Systems
4 - Fire Alarm Panels

Inspected and tested with the Central Fire Alarm Station once each month, and serviced the auxiliary fire alarm system in 127 Public Schools. Responded to School Auxiliary Fire Alarm Systems 41 times.

Installed 9 new municipal Fire Alarm Boxes, making a total of 1,962 boxes now in service.

Maintained 1,962 Fire Alarm Boxes located on City streets, and 70 associated circuits connecting these Fire Alarm Boxes to the Central Fire Alarm Station.

Fire Alarm Box tests totaling 12,009 were made in accordance with the rules of the National Board of Fire Underwriters.

Replaced 48 old style Fire Alarm Boxes with modern 3-fold non-interfering type Fire Alarm Boxes.

ELECTRICAL DIVISION - PLANT



Servicing Traffic Signal
Dispatcher in Shop



Servicing "No Left Turn" Sign
on Lombard Street



Servicing Intersection
Control Equipment



Making repairs to Overhead
Fire Alarm Lines

ELECTRICAL MAINTENANCE DIVISION

Detail assignment responded to 78 cases of Parking Meter trouble.

Replaced 45 old style Fire Alarm Box shells with new center pull break glass shells.

Converted 10 Fire Alarm Box services from overhead wire to underground cable.

Repaired or replaced 27 Fire Alarm Boxes damaged by vehicles.

Relocated 19 Fire Alarm Boxes.

Removed 142 Fire Alarm Boxes to Shop for repairs, and subsequently re-installed.

Maintained Fire Alarm System in the Broadway Tunnel for the Department of Public Works.

Cleared 167 cases of trouble on overhead fire alarm circuits.

Responded to complaints and made 18 repairs on outside local Fire Alarm Systems.

Conducted weekly tests of Market Street crossing bells. Repaired bells at 9 locations.

Rebuilt underground cable pot heads at 55 Fire Alarm Boxes.

Replaced 1,240 feet of ½" conduit to Fire Alarm Boxes on wood poles.

Made repairs, alterations and improvements to overhead Fire Alarm System at 590 locations involving the installation of 377 crossarms and 102,865 feet of overhead line wire.

POLICE DEPARTMENT

Repaired and maintained Police Department's switchboard and related equipment at the new Hall of Justice and 79 telephones located within the building, and 462 call boxes located on the City streets, in parks and public buildings, and military and private police agencies.

Serviced and maintained the Police Teletype System; answered 76 complaints.

ELECTRICAL MAINTENANCE DIVISION

Serviced and maintained the following signal systems at the New Hall of Justice:

Status Boards

- 1) Communications
- 2) Traffic Bureau
- 3) Coroner

Local Telephone Systems

- 1) Chief of Police
- 2) City Jail Visitors
- 3) County Jail Visitors

Bank Alarm System

Auxiliary Fire Alarm System

Interview Recording System

Repaired 78 cases of trouble on the above systems.

Relocated 1 Police Call Box.

Repaired 1 damaged Police Call Box.

Repaired or removed to the Shop for repair 66 Police Call Boxes.

Replaced 280 feet of ½" conduit and wiring to Police Call Boxes mounted on wood poles.

Cleared 77 cases of trouble on overhead Police circuits.

Cleared 34 cases of trouble on underground Police circuits.

Made repairs, alterations and improvements to Police overhead lines at 53 locations, involving the installation of 37 cross-arms and 3,050 feet of overhead line wire.

CITY AND COUNTY RADIO SYSTEM

Tested and serviced once each week the two emergency generators and associated power plant equipment at the Central Radio Station Christmas Tree Point, Twin Peaks.

Maintained the landlines between the Central Radio Station and the control units located in the Hall of Justice, Central Fire Alarm Station, and various other City departments who use the City and County Radio System in their daily operations.

DISASTER CORPS

Serviced, maintained and conducted weekly tests of the City's 53 Air Raid Sirens and associated remote control circuits and

ELECTRICAL MAINTENANCE DIVISION

equipment. Located and cleared or reported to Pacific Telephone Co., for clearance 32 cases of trouble on Air Raid Sirens or control circuits. Maintained emergency power generators, batteries and associated electrical control equipment at the Civil Defense Control Center.

Disconnected Sirens on 16 occasions to permit Pacific Telephone and Telegraph Co., to work on cable without setting off Sirens.

Overhauled Sirens at two (2) locations.

Inspected all Sirens for paint condition.

INSTALLATIONS, RELOCATIONS AND REMOVALS

Bernal Heights Radio Station

Installed automatic transfer equipment to provide power from standby generator during power failure.

Plant Building, 901 Rankin Street

Installed battery charging circuit throughout Garage area.

Wired new dual motor drill press in the Machine Shop.

UNDERGROUND DISTRICTS, NEW SUBDIVISIONS, RELOCATION FOR FREEWAYS, RAPID TRANSIT, ETC.

Department of Electricity facilities were converted from an overhead to an underground system in the following Underground Districts:

Golden Gateway Project	60%
Underground District 172, Parker, .	
Turk, Masonic Stage I and II	30%

ELECTRICAL MAINTENANCE DIVISION

Underground District 166, Marina Stage II	100%
Underground District 166, Marina Stage III and IV	100%
Underground District 179, 14th St. Market & Church to Alpine Terrace	100%
Underground District 169, Telegraph Hill Area, Stage IV and V	100%
Underground District 174, Washington and Spruce, Stage II	100%
Underground District 188, Locust St., Clay to Pacific	100%
Underground District 184, Golden Gate Heights	100%

Installed underground cable and two (2) Fire Alarm Boxes in Mira Glen - new Subdivision.

Relocated Department of Electricity facilities to accommodate Freeway Construction, Orizaba to Eastmore.

Continued with the State Harbor Program of modernizing the Fire Alarm Boxes on the San Francisco Waterfront by replacing ten (10) obsolete boxes with modern, non-interfering succession type Fire Alarm Boxes.

Performed special jobs for Auxiliary Fire Alarm Companies and various Contractors, installing conduit, cable, and related equipment for auxiliary connection to City Fire Alarm Boxes.

Relocated Department of Electricity underground facilities required prior to start of construction on the Montgomery Street Rapid Transit Station.

Submitted plans and estimates for relocating Department of Electricity facilities as required to facilitate construction of the Montgomery St., Powell St., Civic Center, 16th St., and 24th St. Rapid Transit Stations.

ELECTRICAL MAINTENANCE DIVISION

Prepared Plans and Estimates for converting Department of Electricity facilities from overhead to underground in connection with the Department of Public Works Underground District Program for the Fiscal Year 1967-1968.

Repairs, alterations or improvements were made to Fire Alarm, Police and Traffic Underground Cable Systems at 250 locations requiring the installation of approximately 24,454 feet of cable and 2,218 feet of underground conduit.

Checked routing and overhead line clearance in connection with 64 House Moving Permits.

Checked 321 Pacific Telephone Company excavation permits (to determine whether a duct should be provided for the Department of Electricity).

Surveyed and checked Department of Electricity underground facilities and marked locations on the surface of the street in connection with numerous track removal, sewer, water, and other street improvement projects.

Relocation of Department of Electricity facilities for various contractors to accommodate building construction during the fiscal year, amounted to \$6,000.

Maintenance services performed on a work order basis for other City Departments amounted to \$20,842.

Transferred Department of Electricity overhead lines to new poles at 101 locations as required by Pacific Telephone and Telegraph Co., and Pacific Gas and Electric Company, involving the installation of 69 crossarms and 4,520 feet of line wire.

Relocated Department of Electricity facilities on joint poles at 20 locations in order to provide clearance for cable being installed by Television Signal Corp.

* * * * *

ELECTRICAL MAINTENANCE DIVISION
SUMMARY OF TRAFFIC SIGNAL MAINTENANCE
===== FISCAL YEAR 1966-67 =====

The Traffic Signal Maintenance Division responded to a total of 3,119 complaints requiring immediate attention. These complaints were received from various governmental agencies, both Municipal and State, private citizens, and from personnel of the Department of Electricity.

In addition, a planned program of preventative maintenance was followed as the work load allowed.

744 signalized intersections were maintained as of June 30, 1967.

Associated traffic control equipment was maintained as follows:

Walk-Wait Signals.....	992
Walk-Don't Walk Signals.....	78
No Left Turn Signs.....	22
Vehicle Pressure Detectors.....	671
Pedestrian Pushbuttons.....	515
Master Controllers.....	19
	<u>2,297</u>

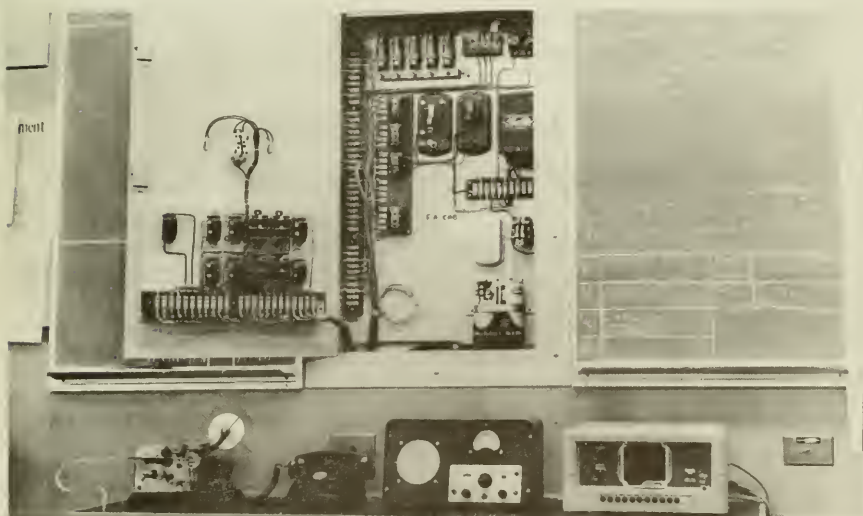
Seventeen (17) new signal controlled intersections were added during the year, as follows:

<u>Intersection</u>	<u>Date in Service</u>
Concourse Drive at the Aquarium (temporary)	September 22, 1966
Sansome and Washington	January 4, 1967
Sansome and Clay	January 9, 1967
Montgomery and Sacramento	February 8, 1967
Montgomery and Washington	" " "
Montgomery and Clay	" " "
Kearny and Sacramento	" " "
Kearny and Clay	" " "
Kearny and Washington	" " "
Sansome and Sacramento	" " "
15th and Valencia	March 7, 1967
23rd and So. Van Ness	" " "
Stockton and Jackson	" " "
Broadway and Kearny	" " "
Battery and Clay	April 10, 1967
Battery and Washington	" " "
Sunset and Ortega	May 25, 1967

ELECTRICAL DIVISION - TRAFFIC



Making line adjustments to incoming teletype lines
at Hall of Justice



Typical Fire Alarm Communications Center in a
Fire House

TRAFFIC SIGNAL MAINTENANCE

Complaints By Month

<u>1966</u>		<u>1967</u>	
July.....	280	January.....	247
August.....	228	February.....	236
September.....	225	March.....	243
October.....	216	April.....	264
November.....	316	May.....	311
December.....	255	June.....	298

There were 191 complaints covering damage to Traffic Signals, requiring the replacement of the following equipment:

16 Conduits and wiring replaced and repaired.
33 10 Ft. marbelite poles.
25 10 Ft. steel poles.
17 Controller and/or base cabinets.
69 Signal heads.
144 Visors for signal heads.
12 Pedestrian signals.
104 Lens and reflectors.
1 Pedestrian pushbutton pole.

298 Signal heads were realigned after being struck by high vehicles.

PREVENTATIVE MAINTENANCE

Material Exchanged for Shop Serviced Spares

Fixed Time Controllers	123
Actuated Time Controllers (Dispatchers)	276
Dial Units	74
Coordination Units	36
Relays	489
Pedestrian Timers	48
Master Controllers	5
Flashers	43
Timers	1
Signal Heads	15
Manual Cords	20
Detector Sensor Units	2

TRAFFIC SIGNAL MAINTENANCE

Repairs and Service in Field

Operation of Signals checked	1,038
Signal Heads serviced	350
Controllers serviced	110
Walk-Wait Signals serviced	351
Masters and Cascade Stations serviced	79
Masters and Cascade Stations A.M. & P.M.	
Off-Set Operation checked	1,867
Defective wiring repaired	66
Pedestrian Pushbuttons changed	32
Adjustments and repairs to clear trouble	618
Adjusted or changed Cabinet Locks	12
Detector Frames repaired	18
Timing checked	90
Timing changed	132
Off-Sets checked	75
Off-Sets changed	30
Timing Cards at intersections installed	224
Controller Cabinets changed	8
Detector Sensor Units adjusted	38
Repairs to Signals put out of order by Vandalism	48
Transformers replaced	13
67 Watt Traffic Lamps changed	15,058
100 Watt Traffic Lamps changed	12
200 Watt Traffic Lamps changed	4
Neon Walk Tubes changed	182
Neon Wait Tubes changed	99

Equipment Repaired and Serviced in Shop

Fixed Time Controllers	143
Traffic Actuated Controllers	300
Dial Units	125
Coordination Units	32
Relays	866
Timers	17
Pedestrian Timers	49
Signal Heads	396
Master Controllers	6
Flashers	50
Manual Control Cords	23
Detector Units serviced	2
Made up New Controllers and Base Cabinets	31

TRAFFIC SIGNAL MAINTENANCE

Completed Work Orders and Service Orders in the amount of \$9,243.06 for improvements to signals as requested by the Traffic Engineering, Department of Public Works.

Maintained weekly lamp check of signal system.

Group relamped and serviced all Signal Heads at 246 intersections to reduce number of complaints of lamps out.

Replaced 109 Pressure Detector Pads at a cost of \$11,253.16 plus labor. We have also installed Loop Detectors at several intersections to replace Pressure Detectors.

Conducted a bi-weekly test of Freeway Detour Signs controlled from the Central Fire Alarm Station.

Conducted weekly tests of ten (10) Cable Car Pre-empt Intersections, one (1) Cable Car Crossing, and one (1) Turn Table location.

Conducted a monthly test of the Fire Alarm Boxes and the Traffic Signal Pre-empt Circuits in the Broadway Tunnel.

Reset Time Clocks and Program Devices one hour ahead in April, and back one hour in October, at 33 locations to conform to the California State Daylight Savings Time.

* * * * *

DEPARTMENT OF ELECTRICITY
SAFETY COMMITTEE

The Department of Electricity Safety Committee is presently composed of eight members representing each of the Divisions of the Department. The Committee meets each month on Wednesday at 1:00 P.M. for the purpose of discussing any unsafe conditions and improving or correcting same. Minutes of these meetings are prepared and approved or corrected at the subsequent meeting.

Of the seven (7) items recommended during the past year, six (6) have been deleted, having been completed satisfactorily. At this date there is one recommendation remaining on the minutes of the Committee, which is the recommendation that the course in Mouth-to-Mouth Breathing be repeated in August 1967. It is expected the programming for the course will be accomplished in that month.

During the year fifteen (15) Industrial Accidents were reviewed and discussed by the Committee and recommendations made. In addition, past industrial accidents were reviewed and discussed in regard to the determination of "Preventable" and "Non-Preventable", and how unsafe acts and conditions could be prevented.

The Committee was represented at the California Safety Congress and Exhibits March 1 and 2 at the Jack Tar Hotel. The Secretary of the Committee attended the morning and afternoon sessions March 2, 1967 and in addition attended the Insurance Luncheon sponsored by the Western Insurance Information Services.

During the year, various pamphlets on safety practices were ordered and received from the Department of Industrial Relations, Division of Industrial Safety, and were distributed to members of the Committee to pass on to the various Divisions.

Seven (7) members of the Safety Committee completed the Driver Training Improvement Course July 13 and July 15, 1966 7:30 A.M. to 11:30 A.M. Thirteen (13) personnel of the Department of Electricity completed the course given June 12 and 19th, 1967 1:00 P.M. to 4:30 P.M. It is expected that when further courses are programmed by the San Francisco Chapter of the National Safety Council that additional personnel, who may be spared from their duties, will be scheduled to attend these courses.

SAFETY COMMITTEE

Safety Movies were shown during the year as recommended by the Committee and it is expected that periodically other movies demonstrating safe practices will be given.

Course in Radiological Training was given May 16 and 18th, 1967 by Mr. L. Cambou. This course was appreciated by all personnel attending and a letter of commendation was written to Mr. Cambou's superior by the General Manager of the Department of Electricity.

Demonstration of the use of Fire Extinguishers was given on March 23rd at 8:45 A.M. The General Manager wrote a letter to Chief William F. Murray for the attention of Chief Henry A. Lindecker, Division of Training, Fire College, thanking him for the lecture and demonstration presented by Lt. Mullally.

The General Manager, Department of Electricity and the members of the Safety Committee wish to thank the San Francisco Chapter of the National Safety Council and its personnel for the fine cooperation afforded during the year.

It is the endeavor of the Safety Committee of the Department of Electricity to follow through on any unsafe condition or practice in order that the Department's good record may be maintained.

* * * * *

FIRE ALARM OFFICE

The Fire Alarm Office at 1003 Turk Street includes receipt of alarms and dispatching fire apparatus. It is responsible for the operation of the entire fire alarm telegraph system of San Francisco. Fire Alarm personnel also receive trouble complaints and dispatch repairmen in connection with emergency repairs to traffic signals, police and fire communication equipment, test defective circuits, and operate the Civil Defense air raid warning system.

Personnel assigned to the Fire Alarm Office consist of the following:

- 1 - Chief Fire Alarm Dispatcher
- 9 - Fire Alarm Dispatchers
- 4 - Senior Telephone Operators

The following summarizes the activities of the Central Fire Alarm Station for the year ending June 30, 1967:

First Alarms of Fire Received and Transmitted	12,240	
Second " " " " "	121	
Third " " " " "	48	
Fourth " " " " "	5	
Fifth " " " " "	1	
Stills	10,173	
Directs	839	
Special Calls	<u>180</u>	23,607

Secondary Signals transmitted covering Alarms of Fire and routine operational business of the Fire Department

118,438
142,045

Total Fire Alarm Boxes in service: 2,024
Total Police Boxes in service: 466

The following summarizes complaints received from the Police Department, other Municipal Agencies and private citizens concerning equipment listed below:

Fire Alarm Wire Trouble	215
Sirens	25
Police	192
Radio	57
Traffic Signals	3,149
Teletype	13
Miscellaneous	408
Registers	151
Outside Locals	<u>8</u>
	<u>4,218</u>

FIRE ALARM OFFICE

Fire Alarm Boxes temporarily out of service.....	422
Fire Alarm Boxes out of service for repair, Relief Boxes in service replacing same.....	142

ADMINISTRATION

The principal function of the general office is fiscal control to assure that funds are expended for the purpose in which they were appropriated. This is achieved through the annual preparation and consolidation of the Departmental Budget. Budgetary control consists of appropriations, allotments, reserves, expenditures, encumbrances and reconcilements. All transactions of a financial nature are controlled by the allotment method under the municipal system of accounting.

In addition to fund accounting, records are maintained for the purpose of cost accounting. Billing, statistics, forecasting, inventory, statements and reports are based on adequate cost records. A comprehensive job distribution, embracing most of the productive operations in the Department, is reduced to a four digit number and becomes the basic source of data for our direct labor and material costs. The maintenance of adequate records provide the following:

- 1) Meet legal requirements. .
- 2) Measure the results of the Department's operations.
- 3) Develop cost standards.
- 4) Organize information to management for making decisions.
- 5) Accountability.

Other administrative functions are personnel, cash revolving fund, storekeeping, and management. Personnel assigned to Administration include General Manager, Senior Accountant, Accountant, Account Clerk, Clerk-Typist, Senior Clerk-Stenographers and Storekeeper.

STATEMENT OF APPROPRIATED AND OTHER FUNDS

YEAR ENDING JUNE 30, 1967

	<u>Allowance</u>	<u>Cost</u>	<u>Balance</u>
<u>Administration & Operation:</u>			
Personal Services	\$ 217,711	211,667	6,044
Contractual Services	19,496	19,522	(26)
Materials & Supplies	1,381	1,286	95
<u>Maintenance & Construction</u>			
Personal Services	1,021,644	1,008,240	13,404
Contractual Services	11,231	10,215	1,016
Materials & Supplies	116,442	109,363	7,079
Equipment	<u>62,368</u>	<u>57,271</u>	<u>5,097</u>
Total Operating Budget	\$ 1,450,273	1,417,564	32,709
<u>Work Orders:</u>			
Electrical Maintenance	92,290	20,843	71,447
Mechanical Maintenance	4,639	6,084	(1,445)
Radio Communication	110,473	77,537	32,936
<u>Private Contractors:</u>			
Traffic Signal Relocation	6,343	2,427	3,916
Fire and Police Box Relocation	1,094	5,999	(4,905)
<u>Continuing Appropriations:</u>			
Installation Fund	11,523	13,050	(1,527)
Reconstruction & Replacement		28,557	(28,557)
Capital Improvements	<u>5,033</u>	<u>37,353</u>	<u>(32,320)</u>
Total Funds Received in 1966-67	\$ <u>1,681,668</u>	<u>1,609,414</u>	<u>=72,254</u>

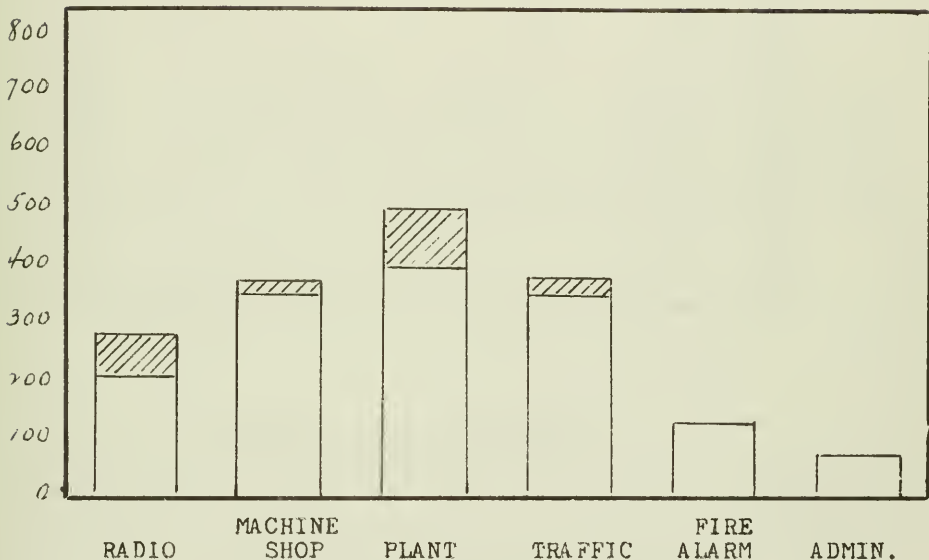
REGULATORY AND INSPECTION SERVICES
 YEAR ENDING JUNE 30, 1967
 =====

	Estimated <u>Revenue</u>	Actual <u>Revenue</u>
<u>Police Terminal Alarm Panel</u>		
Firms engaged in the business of installing and maintaining security alarm systems shall pay to the Department of Electricity \$2.75 per month for each connection to the Police Terminal Alarm Panel.	\$ 4,026	3,867
<u>Off Premise Fire Alarm Locals</u>		
Firms engaged in the business of installing electric apparatus in connection with the Fire or Police Telegraph and Telephone System shall pay to the Department of Electricity the actual cost but not less than a minimum of \$10.00.	3,117	3,311
<u>Housemoving</u>		
The housemover shall pay to the Department of Electricity the actual cost of inspecting the overhead line wires.	315	404
<u>Loudspeaker on Vehicles</u>		
Individuals or firms installing a loudspeaker system on vehicles shall pay to the Department of Electricity \$3.50 per month for the inspection of each sound amplifier and its audio quality.	210	133
Total	\$ 7,668	7,712

Source and Use of Funds

1966 - 1967

\$ Thousands



OPERATING BUDGET



WORK ORDERS, PRIVATE CONTRACTORS, INSPECTION FEES

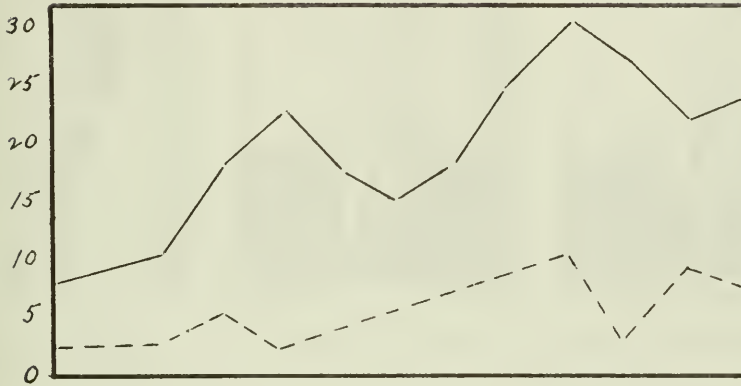
TOTAL SOURCE - 1.7 MILLION

TOTAL USE - 1.6 MILLION



Damages Collected

\$ Thousands



———— Damages to Traffic Signals

----- Damages to Parking Meters, Police and Fire Alarm Boxes

JOB COSTS PERTAINING TO DAMAGES TO CITY PROPERTY UNDER THE JURISDICTION OF THE DEPARTMENT OF ELECTRICITY ARE COMPUTED AND FORWARDED TO RESPONSIBLE PARTIES FOR COLLECTION. IN THE YEAR ENDING JUNE 30, 1967 THE TOTAL CASH RECEIVED FROM DAMAGE CLAIMS AMOUNTED TO \$30,646.

ADMINISTRATIVE STAFF



GRACE WENHAM
Secretary to
General Manager



BURTON H. DOUGHERTY
General Manager



ROBERT YUEN
Senior Accountant



JOSEPH A. PETRINI
Machine Shop & Parking
Meter Superintendent



FRANK L. GARKUS
Radio Engineer



DOYLE L. SMITH
Electrical Maintenance
& Construction
Superintendent



F 1967-68 San Francisco. Department of Electricity.

55
1

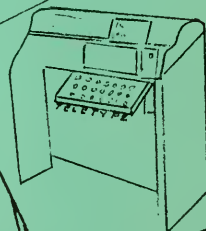
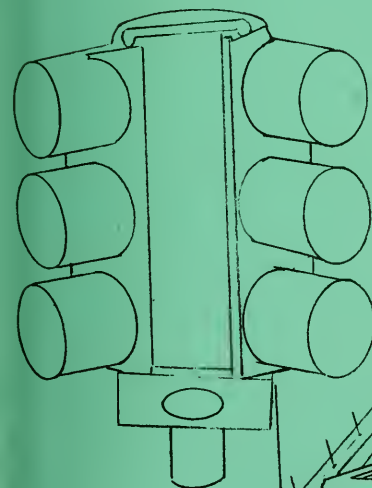
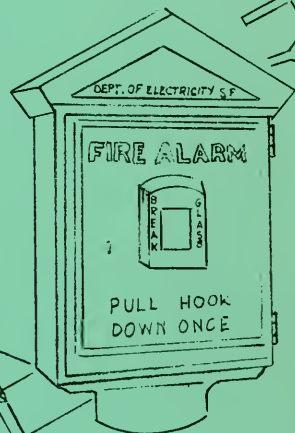
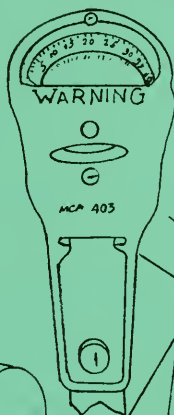
DEPARTMENT OF ELECTRICITY

ANNUAL REPORT
1967-1968

DOCUMENTS

AUG 28 1968

SAN FRANCISCO
PUBLIC LIBRARY



August 9, 1968

Mr. Thomas J. Mellon
Chief Administrative Officer
City and County of San Francisco
289 City Hall
San Francisco, California 94102

Dear Mr. Mellon:

I am submitting the Annual Report of the Department of Electricity for the Fiscal Year 1967-1968 in compliance with the provisions of Section 20 of the Charter of the City and County of San Francisco.

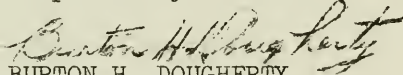
During the fiscal year there have been expansions in all areas of our responsibility resulting in an increased work load for our employees.

I wish to thank the dedicated employees of our Department for making it possible to continue to maintain a uniformly high degree of service for all City Departments.

During the year authorizations were granted for two additional companies to provide Central Station fire reporting service with interconnect to our Central Fire Alarm Station, and two additional permits were granted by the Board of Supervisors for companies to provide Auxiliary Fire Alarm system interconnect through master boxes. These authorizations and permits will increase the efficiency of our fire reporting service.

I appreciate and thank you and your staff for the understanding and cooperation in reviewing our budget and work program for the year.

Respectfully submitted,


BURTON H. DOUGHERTY
General Manager
Department of Electricity

A N N U A L R E P O R T
D E P A R T M E N T O F E L E C T R I C I T Y
C I T Y A N D C O U N T Y O F S A N F R A N C I S C O
F I S C A L Y E A R 1 9 6 7 - 1 9 6 8

H O N . J O S E P H L . A L I O T O
M A Y O R

T H O M A S J . M E L L O N
C H I E F A D M I N I S T R A T I V E O F F I C E R

B U R T O N H . D O U G H E R T Y
G E N E R A L M A N A G E R

TABLE OF CONTENTS

LETTER OF TRANSMITTAL.....	FRONT
RADIO DIVISION.....	1
MECHANICAL DIVISION.....	11
ELECTRICAL DIVISION.....	18
FIRE ALARM DIVISION.....	31
ADMINISTRATION.....	32
SAFETY COMMITTEE.....	36
RETIREMENT COMMITTEE.....	37

ILLUSTRATIONS

ORGANIZATION CHART.....	FRONT
RADIO DIVISION.....	7
MECHANICAL DIVISION.....	15
ELECTRICAL DIVISION.....	20 21
CHART.....	35

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

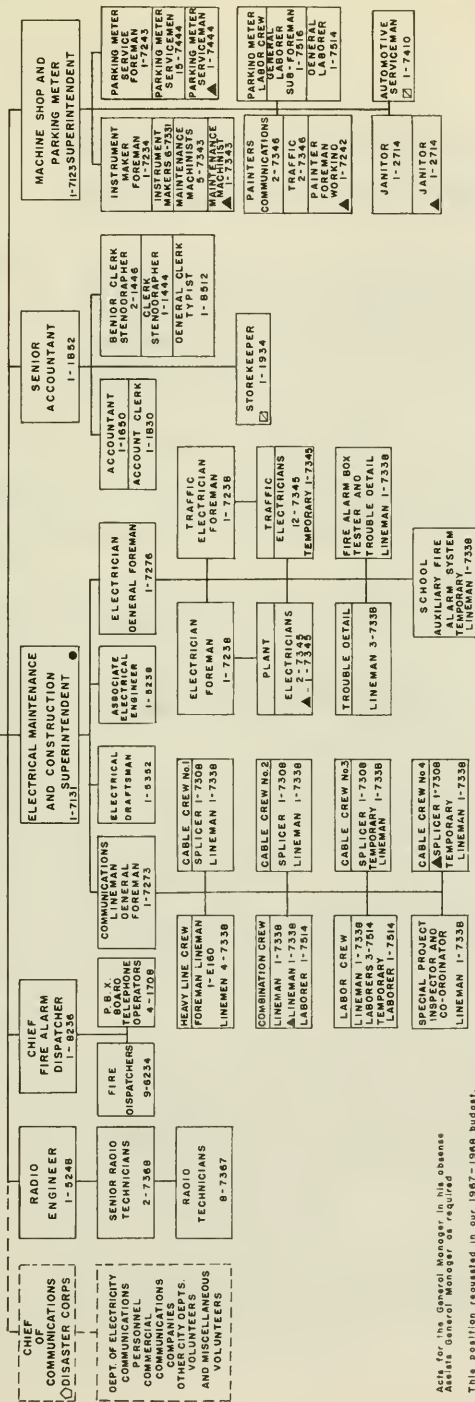
THEORY OF THE

THEORY OF THE

THEORY OF THE

THEORY OF THE

GENERAL MANAGER
DEPT. OF ELECTRICITY
1-1150



Acts for the General Manager in his absence

▲ This position requested in our 1967-1968 budget.

<input checked="" type="checkbox"/>	Automotive service mon Storekeeper	Assigned to this Department by Purchaser of Supplies

General Manager functions as Chief of Communications Division under Disaster Corps Operations

RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1967-68

Responsibility: Design, provide, install and maintain Public Safety and other comparable Radio Communications Systems, equipments and associated facilities for various departments of the City and County of San Francisco

POLICE DEPARTMENT

The following services were performed for the Police Department:

Maintenance and repair service at the Radio Shop.

Maintenance and repair service at various outlying locations.

Federal Communications Commission frequency, deviations and power measurements.

Installation of equipment in replacement vehicles.

Removal of radio equipment from obsolete vehicles.

Responded to emergency service calls during off-duty hours and/or holidays.

Performed preventive maintenance services at various locations for Disaster Corps communications equipment.

Microwave System

A Microwave System contract was awarded to Farinon Electric and is presently nearing completion. The system will serve as a backup for land line control for the Police, Fire and Local Government radio systems. (As this report is being prepared, the system is in operation and undergoing acceptance tests.)

Base Radio Station (Bernal Heights)

An additional Police Base Station, operating on 45.14 MHz, was completed and accepted by the City and County of San Francisco. The contract was awarded to the General Electric Company. The station is presently in operation.

RADIO DIVISION

Tone-Coded Squelch System

A Tone-coded Squelch System, for the purpose of alleviating frequency interference, has been completed by the Department of Electricity Radio Shop. The contract for the equipment was awarded to the Mu Western Company and is presently in operation.

Status Map Modification

Concept specifications and drawings were prepared for a proposed modification of the Police Status Map located at the Hall of Justice.

Command Car (Police)

The Radio Division specified, procured and installed radio communications to cover the major Police radio channels. The Command Car is presently in operation.

New Central Police Station

The Radio Division is maintaining close liaison with Planning and Research regarding the new communications facilities being incorporated in the building. Upon completion of the building, the Radio Division will modify Federal Communications Commission license, transfer the present radio equipment and add additional equipment, if required.

Augmentation of Police Radio System (P.I.C.)

Twelve (12) frequencies were approved by the Northern California Frequency Advisory Committee for the City and County of San Francisco for the proposed purpose of equipping the officer-on-the-street with two-way radio communications. The system is now being designed by the Department of Electricity and propagation field tests are presently being conducted for suitable radio sites. Upon allocation of funds, this Department will specify and requisition equipment in accordance with budgeted funds. The proposed system will operate in the Ultra High Frequency (UHF) bands and will consist of nine (9) strategically located Base Stations and three hundred (300) portable units. The estimated completion date for the system is 1971.

RADIO DIVISION

FIRE DEPARTMENT

Fire Communications Unit (Command Car)

Specifications, design and drawings were prepared by the Radio Division and contract awarded by Purchasing Department. Radio communications to cover San Francisco Fire Department, State of California Fire Point-to-Point and San Francisco Local Government Service communications were specified, procured and installed. The vehicle is presently in service.

Aerial Intercom

An intercommunications system was specified, procured and installed atop sixteen (16) Aerial Ladder trucks. The equipment is presently in service.

DEPARTMENT OF ELECTRICITY

Extension of Radio Tower Walls

Plans and specifications were submitted for a protective fence to extend atop the present walls and cover the overhead. The project, under the direction of the Department of Public Works, has been completed.

Security for Central Radio Station

Concept drawings and general recommendations were submitted to the Director of Public Works, by the Radio Division, suggesting various electronic alarms for greater security. The plan is presently under study by the Department of Public Works engineers.

SAN FRANCISCO DISASTER CORPS

Communications Van is near completion. Specifications were written for outfitting to include materials and equipment. Installation of the various radio equipment was performed by the Department of Electricity Radio Shop, which includes:

1. Five (5) Police Transmitter/Receiver units/extended controls.
2. One (1) Fire Transmitter/Receiver unit/extended control.
3. One (1) Local Government unit/extended control.
4. One (1) Amateur all-band transmitter.
5. One (1) Amateur all-band receiver.
6. Intercom unit from Supervisor's position to driver's compartment.

RADIO DIVISION

An Amateur antenna (6m) was installed at Emergency Operating Center.

Matching fund applications were prepared and submitted for communications and siren maintenance.

CORONER'S OFFICE

Specifications were written and an estimate submitted to the Coroner regarding the transfer of his radio system from Police to Local Government Service system.

FEDERAL COMMUNICATIONS COMMISSION LICENSING AND ASSOCIATED MATTERS

Prepared, submitted and received Federal Communications Commission licenses as follows:

1. Renewed license for San Francisco General Hospital.
2. New Marine license (Department of Public Works).
3. Special Temporary Authority for Fire frequency (450 MHz).
4. Modified Fire licenses (18 Base Stations).
5. Microwave licenses for Central Radio Station, Hall of Justice and Central Fire Alarm Station.
6. Modified Police mobile license (new frequency).

San Francisco was represented at Northern California Frequency Advisory Committee Meetings (Associated Public-Safety Communications Officers, Inc., Monthly).

Special permission was granted by the Federal Communications Commission to re-license Fire Base Station licenses from dual licenses for each Station to a single license for each Station.

San Francisco was cleared by the Northern California Associated Public-Safety Communications Officers, Inc., for twelve (12) 450 MHz frequencies for an expanded Police communications system.

Various field surveys were conducted to determine frequency propagation for the 150 MHz and 450 MHz bands.

RADIO DIVISION

RADIO SHOP ACTIVITIES

Mobile Two-Way Radio Units Repaired in Radio Shop:

1615 - Police Department (cars)
343 - " " (motorcycles)
36 - " " (Handie-Talkies)
428 - Fire Department (cars and trucks)
159 - " " (Handie-Talkies)
34 - " " (Item 15 Monitor/Receiver)
66 - Dept. of Electricity (cars and trucks)
153 - Municipal Railway (cars and trucks)
17 - " " (coaches)
182 - Water Department (cars and trucks)
71 - Department of Public Works (cars and trucks)
20 - Health Department (cars and ambulances)
10 - Disaster Corps (cars)
42 - Miscellaneous

Mobile Two-Way Radio Installations:

63 - Police Department (cars)
46 - " " (motorcycles)
17 - Fire Department (cars and apparatus)
9 - Department of Public Works (cars and trucks)
4 - Department of Electricity (trucks)
9 - Miscellaneous

Mobile Two-Way Equipment Removal:

57 - Police Department (cars)
49 - " " (motorcycles)
18 - Fire Department (cars and apparatus)
2 - Coroner's Office (cars)
3 - Health Department (ambulances)
6 - Department of Electricity (trucks)
5 - Department of Public Works (cars and trucks)
3 - Miscellaneous

Radio Shop Bench Repair:

844 - Miscellaneous Electronics
1855 - Federal Communications Commission Calibrations
348 - Preventive Maintenance Checks
1938 - Special Non-recurring Projects

RADIO DIVISION

WORK ORDERS - RADIO DIVISION

1967 - 1968

- 7-59 - Airport maintenance.
- 7-380 - Strip and reinstall radio in Fire vehicle.
- 7-453 - Strip and reinstall radio in Fire vehicle.
- 7-454 - Strip radio equipment from 52 obsolete vehicles; reinstall equipment in 52 new replacement vehicles.
- 7-814 - Airport maintenance.
- 7-919 - Furnish ten (10) portable two-way radios.
- 7-1094 - Strip radio equipment from obsolete Department of Public Works vehicle; reinstall in new service truck.
- 7-1095 - Furnish and install two-way radio in Dept. of Public Works service truck.
- 7-1319 - Airport maintenance.
- 7-1470 - Furnish and install Marine two-way radio in Dept. of Public Works boat.
- 7-1656 - Additional maintenance cost for Water Department.
- 7-2004 - Airport maintenance.
- 7-2224 - Supplement for Work Order 7-1095.
- 7-2315 - Furnish and install two-way radio in Department of Public Works service vehicles.

RADIO COMMUNICATION

Fire Department Communication Unit Designed
and Built by the Department of Electricity



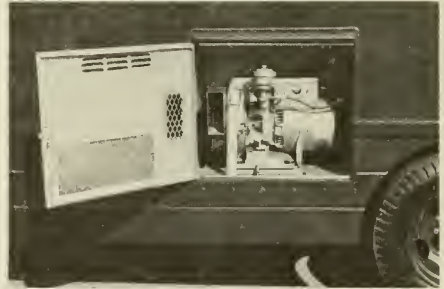
Getting Started



Completed



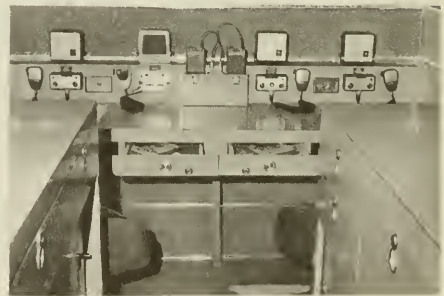
Compartment for Engine Generator



Generator Installed



Interior Unfinished



Interior Finished



RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1967-68

EMPLOYEE COMPLEMENT

<u>NUMBER OF</u> <u>EMPLOYEES</u>	<u>TITLE</u>	<u>CLASS</u>
1	Radio Engineer	5246
2	Sr. Radio Technicians	7368
8	Radio Technicians	7367

PERCENTAGE OF LABOR ALLOCATED

<u>DEPARTMENT</u>	<u>% 5246</u>	<u>% 7368</u>	<u>% 7367</u>	<u>Hours</u> <u>Overtime</u>
Police	30	53.97	43.07	131
Fire	20	43.93	28.45	63
Dept. of Public Works	6	.84	1.09	-
Electricity	15	.98	20.36	1
Health	2	-	.52	1½
Coroner	2	-	.05	-
Municipal Railway	8	-	2.18	13
Water	10	-	2.01	-
Disaster	2	.28	1.82	-
Supervisors	3	-	.21	-
Mayor	1	-	.03	-
Miscellaneous	1	-	.21	1

Hours Overtime	210½
Days (Temporary Employees)	543
Days (Vacation Relief):	
Class 7368	15
Class 7367	110

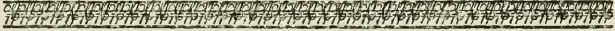
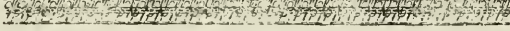
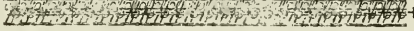
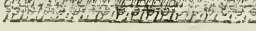
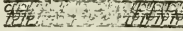
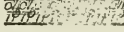



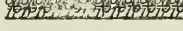
RADIO DIVISION
MOBILE TWO-WAY RADIO EQUIPMENT SERVICED AND MAINTAINED
FISCAL YEAR 1967-68

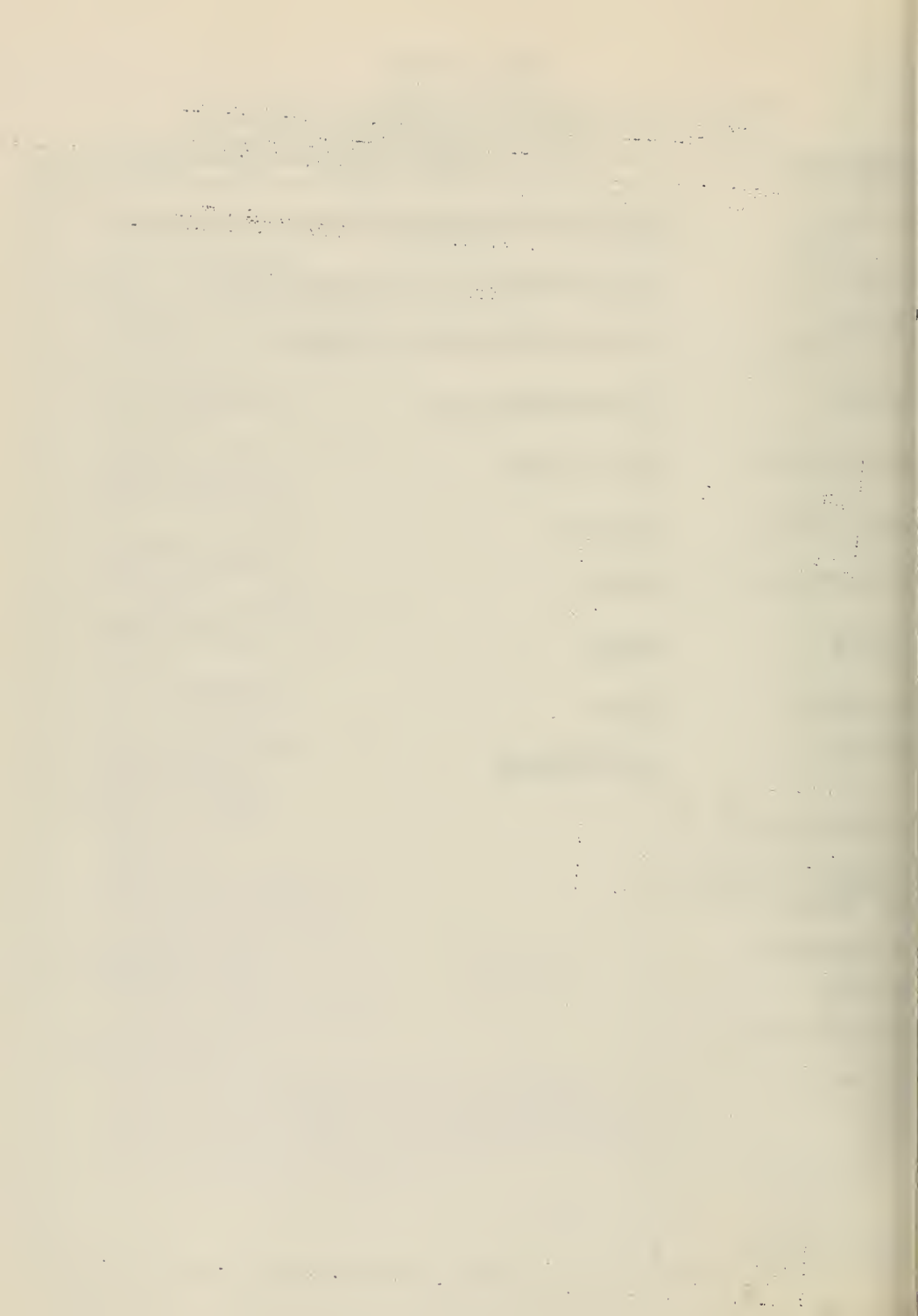
	<u>No. of Vehicles</u>	<u>No. of Portable Radios</u>	<u>Total</u>
<u>POLICE DEPARTMENT</u>			
Cars	265 (269 Units)	37	481
Command Car/6 radios	6		
Motorcycles-Solo	90		
Motorcycles, 3-whlrs.	79		
<u>FIRE DEPARTMENT</u>			
Cars & Apparatus	161	54	222
Fireboats	2		
Command Unit/5 radios	5		
<u>WATER DEPARTMENT</u>			
Cars and Trucks	89	2	91
<u>MUNICIPAL RAILWAY</u>			
Cars & Trucks	42		
Coaches	25		67
<u>DEPARTMENT OF PUBLIC WORKS</u>			
Cars & Trucks	41		
Boat	1	4	46
<u>LOCAL GOVERNMENT</u>			
Cars & Trucks	32		32
<u>HEALTH DEPARTMENT</u>			
Ambulances	14		
Station Wagon	1	3	18
<u>SPECIAL POLICE</u>			
Cars	8		
Motorcycle	1		
<u>SOCIETY FOR PREVENTION OF CRUELTY TO ANIMALS</u>			
	8		8
<u>DISASTER CORPS</u>			
Cars	3 w/9 units	2	19
Command Van/8 radios	1 w/8 "		
<u>MISCELLANEOUS</u>			
Coroner 3, Housing Police 2, Mayor 2, Chief Administrative Officer 1, Chaplain 2, Police Commissioners 3, Fire Commissioners 4, Federal Bureau of Investigation 3, State Law Van 1, Broadcast Radios 6			27
Total			1020

RADIO DIVISION

MOBILE TWO-WAY RADIOS SERVICED AND MAINTAINED FISCAL YEAR 1967-68

Number of Vehicles

DEPARTMENT	0	50	100	150	200	250	300
POLICE							
FIRE							
POLICE (Motorcycle)							
WATER							
MUNICIPAL RY.							
PUBLIC WORKS							
DEPT. OF ELECTRICITY							
HEALTH							
DISASTER							
OTHER:							
SPECIAL POLICE							
SOCIETY FOR PRE- VENTION OF CRUELTY TO ANIMALS							
COMMISSIONERS							
CORONER							
HOUSING POLICE							
CHAPLAINS							
MAYOR							
CHIEF. ADMIN. OFFICER							
FED. BUR. OF INVESTIGATION							



MECHANICAL DIVISION
MANUFACTURE, MAINTENANCE &
REPAIR

Under general administrative direction of the General Manager, the Machine Shop and Parking Meter Superintendent directs and supervises all maintenance and repair to all mechanical equipment under the jurisdiction of the Department of Electricity.

This equipment includes 2,034 Fire Alarm Boxes, 469 Police Patrol Boxes, all Instruments, Recorders, etc., at the Central Fire Alarm Station, all mechanical equipment at the Central Radio Station, Hall of Justice Communication's Room, 762 Traffic Signal Controlled Intersections, 12,730 Parking Meters and 53 Air Raid Warning Sirens.

Work is accomplished by the personnel of the Mechanical Division:

- 1 - Machine Shop and Parking Meter Superintendent
- 1 - Instrument Maker Foreman
- 6 - Instrument Makers
- 5 - Maintenance Machinists
- 1 - Parking Meter Serviceman Foreman
- 15 - Parking Meter Servicemen
- 4 - Painters
- 1 - General Laborer Foreman
- 1 - Laborer
- 1 - Janitor
- 1 - Automotive Serviceman

The painting and appearance of this equipment is the obligation of this Division and the painting program is continued to the fullest extent with the available personnel. We requested one working Painter Foreman in the 1967-1968 and 1968-1969 Budgets; the requests were denied, and as a result we cannot paint signals as often as they should be done.

MECHANICAL DIVISION

Fifty-one (51) pieces of gas engine driven equipment - 45 mobile, 6 stationary, are kept in repair by the Purchasing Shops, but are under the control of the Machine Shop and Parking Meter Superintendent. The servicing of this equipment is done by 1 - Automotive Serviceman at 901 Rankin St.

The maintenance of three Departmental Buildings is directed by the Machine Shop and Parking Meter Superintendent, though the work is accomplished by the Department of Public Works or through contractual services. An additional janitor has been requested in each budget for the past four years; the requests have been denied each time and as a result we cannot have the cleanliness and sanitation that is necessary.

The Mechanical Division works in close harmony with the Plant, Electrical, Traffic, and Radio Divisions of the Department of Electricity and with other Departments of the City to better serve the public.

Manufacturing

Various three-fold non-interfering Fire Alarm Boxes were made to replace obsolete Fire Alarm Boxes in the High Value Districts and new underground Districts, and old-type Fire Alarm Boxes were rebuilt to modern standards. Replacement parts and/or component parts for Fire Alarm Boxes, Police Patrol Boxes, Registers, Instruments, Parking Meters, were manufactured in the Machine Shop as needed.

Several new Parking Meter installations were made on side streets with more installations projected for the future. There are 12 off-street parking lots with a total of 315 Parking Meters. We requested a Parking Meter Serviceman and a Machinist in the 1967-1968 budget, and two Parking Meter Servicemen and a Machinist in the 1968-1969 budget, and the requests were denied. This will hamper the preventive and regular maintenance in the future. The work load is too great for the number of employees we now have.

Miscellaneous tool and die and experimental projects, and Parking Meter tests were undertaken and completed. Special mechanical fixtures and apparatus were designed and manufactured for the various divisions of this Department to produce functional improvement.

MECHANICAL DIVISION

Maintenance and Repair

We performed as much preventive maintenance as possible with the available personnel and all necessary repairs were performed on all equipment pertaining to the Department of Electricity.

Painting

Fire Alarm Boxes, Police Patrol Boxes, Traffic Signals and Controllers, Air Raid Sirens, Parking Meters, and other miscellaneous equipment were prepared and painted in the Shop and Field.

Other Duties

Data was compiled for the Annual Budget of this Division by the Machine Shop and Parking Meter Superintendent, necessary specifications for machinery and automotive equipment were written and requisitions for equipment and supplies were made. Reports and correspondence related to the Mechanical Division were processed.

Records on all mechanical equipment and all parking meter field and shop services were kept.

A close liaison between this Division, the Police Department, Department of Public Works, and the Department of Finance and Records will be maintained to perform a better and more efficient Parking Meter Service for all concerned.

* * * * *

PERCENT OF PERSONNEL ALLOCATED - VARIOUS DIVISIONS

No.	Class	Title	Fire	Police	Traffic	Radio	Parking Meters	Air Raid & C.D.	Misc.
1	7123	Machine Shop & Parking Meter Supt.	25	12	16	5	34	1	7
1	7234	Instrument Maker Foreman	25	10	15	5	30	1	14
6	7331	Instrument Makers	47	12	20	7	-	1	13
4	7343	Maint. Machinists					100		
1	7215	Gen. Laborer Foreman					100		
1	7514	Gen. Laborer					100		
1	7243	Parking Meter Serviceman Fore- man					100		
15	7444	Parking Meter Servicemen					100		
4	7346	Painters	2-70	1-25	2-100	1-1	1-20	1-5	1-9
1	7410	Automotive Serviceman	30	15	25	10	15		5
1	2714	Janitor	40	10	30	10			10
1	B512	Gen. Clk Typist	5	3	5	1	84		2

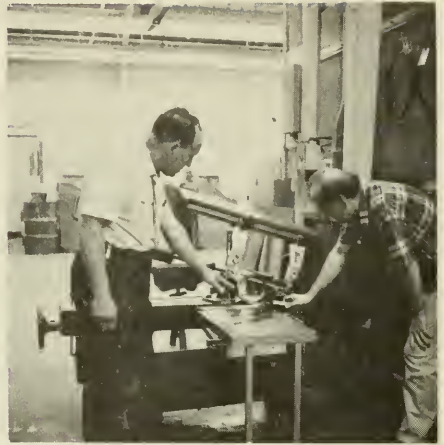
Temporary personnel were hired for vacation relief and special projects, as follows:

1 -	7243	Parking Meter Serviceman	Foreman	15 days
1 -	7331	Instrument Maker		48 "
2 -	7343	Machinists		85 "
2 -	7346	Painters		31 "
2 -	7444	Parking Meter Servicemen		120 "

MECHANICAL DIVISION



Instrument Makers Manufacturing
New Fire Alarm Boxes



Instrument Maker Cutting Material
on Band Saw



Instrument Maker Manufacturing
Parking Meter Parts



Machinists Cleaning and Overhauling
Parking Meters



MECHANICAL DIVISION

SUMMARY OF ACTIVITIES
FISCAL YEAR 1967-68

	<u>Total Number</u>
Manufactured Fire Alarm Boxes and Component Parts	5,140
Repaired Fire Alarm Boxes and related equipment	5,092
Manufactured Police Call Boxes and Component Parts	693
Repaired Police Telephones and related Communications Equipment	181
Manufactured Traffic Signal Component Parts and Tools	415
Repaired Traffic Signal Components and related Equipment	264
Manufactured and Repaired Miscellaneous Radio Equipment Items	495
Miscellaneous Items Manufactured and Repaired for Plant and Vehicular Equipment	766
Manufactured Jigs, Fixtures, Tools, Stamping Dies and Patterns for Machine Shop Production and Maintenance Work	136
Manufactured Miscellaneous Parking Meter Parts	11,846
Repaired Parking Meter Cases, Mechanisms, Timers and Miscellaneous Parts	19,225

All Registers serviced weekly; all Tappers, Jokers and Repeaters serviced monthly at the Central Fire Alarm Station, 1003 Turk Street.

Parking Meter Servicemen performed 123,302 field service operations including inspections and tests for Traffic Fines Bureau while patrolling their respective districts on a daily basis and maintaining the 12,730 parking meters in the field. Included in the 123,302 field service operations is the Parking Meter Laborers time in the straightening, resetting, replacing, installing, relocating and removing Parking Meter Posts in the amount of 5,445 operations.

10,508 telephone complaints on mechanical failures of Parking Meters were received and acted upon.

MECHANICAL DIVISION

The following shows material costs incurred through vandalism and traffic damages:

Traffic Damages to Parking Meters	\$12,999.93
Vandalism	<u>1,691.59</u>
Total	<u>\$14,691.42</u>

PAINTING - FIELD AND SHOP

The following items have been prepared, primed and finish coated:

<u>TRAFFIC SIGNALS</u>	<u>TOTAL NUMBER</u>
Vehicular Signals - Field	1,238
" " - Shop	342
Signal Controllers - Field	172
Signal Controllers, Doors, Posts, Bases, etc. - Shop	770
Walk-Wait Pedestrian Signals - Field	259
" " " - Shop	154
Signal Posts, Poles, etc., - Field	474
<u>POLICE COMMUNICATION</u>	

Police Call Boxes-Field and Shop	168
Miscellaneous items - Shop	15

FIRE ALARM SYSTEM

Fire Alarm Boxes - Field and Shop	1,058
Fire Alarm Box Posts, Bases, Inner Shells Sockets, Movement Housing, etc.-Field & Shop	1,106

PARKING METERS

Parking Meter Cases - Shop	217
----------------------------	-----

MISCELLANEOUS PAINTING AT PLANT, 901 RANKIN ST.,
CENTRAL FIRE ALARM, 1003 TURK STREET, AND
CENTRAL RADIO STATION, TWIN PEAKS

Cabinets, Siren Parts, Ladders (oiled-shellacked), Brackets, Radio Equipment, Parts, Aluminum Strips, Redwood Moulding, touch-up, etc.	628
--	-----

ELECTRICAL DIVISION
SUMMARY OF WORK PERFORMED
FISCAL YEAR 1967-1968
=====

CONSTRUCTION, MAINTENANCE AND REPAIR OF:

Central Fire Alarm Station, includes standby generator, rectifiers, main batteries and all electrical fire alarm communication apparatus and circuitry.

Circuits from Central Fire Alarm Station to 2,034 Fire Alarm Boxes located in the City streets; testing of each box at 60 day intervals.

Auxiliary Fire Alarm Systems in 127 Public Schools - includes inspection and testing of each school with Central Fire Alarm Station on a monthly basis.

Police Department Emergency Telephone System, consisting of a switchboard and circuits to 469 Police Call Boxes on the City streets and 79 locals in the Hall of Justice and various Bureaus and Police Stations.

Police Teletype System which includes two teletype transmitters and control consoles located in the Hall of Justice with circuits to 22 printers located in the Hall of Justice and to various Bureaus and Police Stations in the City.

Bank Alarm System, Private Local Telephone Systems and Communication Alarm and Signal Systems in the Hall of Justice.

Traffic Signals and associated underground control cables at 762 intersections.

Air Raid Sirens at 53 locations and associated remote control equipment.

Overhead lines and underground cable system through the City's 49 square mile area.

Auxiliary Fire Alarm Systems: this Division approves, tests, and supervises the connection of Auxiliary Fire Alarm Systems to the Municipal Fire Alarm System by the Auxiliary Fire Alarm Companies legally authorized by franchise or permit to engage in auxiliary fire alarm business in San Francisco.

ELECTRICAL DIVISION

PERMANENT PERSONNEL

- 1 - 7273, Electrical Maintenance and Construction Superintendent
- 1 - 5238, Associate Electrical Engineer
- 1 - 5352, Electrical Draftsman
- 1 - 7273, Lineman General Foreman
- 1 - 7257, Lineman Foreman
- 13 - 7338, Lineman
- 3 - 7308, Cable Splicers
- 1 - 7276, Electrician General Foreman
- 2 - 7238, Electrician Foreman
- 14 - 7345, Electricians
- 4 - 7514, General Laborer

Days worked by temporary personnel in the Electrical Division during the fiscal year due to work orders, special projects, vacation relief, and retirements.

7273	Lineman General Foreman	105	Days
7257	Lineman Foreman	231	"
7338	Lineman	923	"
7308	Cable Splicer	224	"
7345	Electrician	510	"
7238	Electrician Foreman	73	"

FIRE ALARM SYSTEM

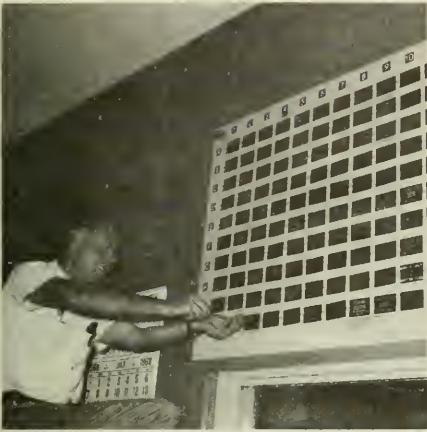
Maintained fire alarm equipment in the Central Fire Alarm Station and in 48 Fire Stations; also maintained the communication systems connecting these facilities.

Repaired or replaced in Fire Stations:

- 164 - Registers
- 58 - Bells
- 40 - Relays
- 47 - Automatic Light Switches
- 21 - Intercommunication Systems
- 10 - Fire Alarm Panels

Inspected and tested with the Central Fire Alarm Station 2,034 Fire Alarm Boxes at least once every 60 days.

ELECTRICAL DIVISION



Repairing Bank Alarm
Panel



Testing Standby Generator
at Central Radio Station



Radio Dispatch Desk
Operations Room



Dispatching Repair Crews from
Operations Room



ELECTRICAL DIVISION



Repairing Traffic Signal
Dispatcher in Shop



Stocking Traffic Signal
Maintenance Truck



Inspecting Micro-wave Tower
at Hall of Justice



Testing Controller in
Traffic Shop



ELECTRICAL DIVISION

Inspected, serviced and tested with the Central Fire Alarm Station the Auxiliary Fire Alarm System in 127 Public Schools at least once each month.

Responded to Schools on 80 occasions in regard to complaints or to assist school district personnel with trouble on the Local Fire Alarm or the Auxiliary Fire Alarm System.

Replaced 30 old style Fire Alarm Boxes with modern 3-fold non-interfering type Fire Alarm Boxes.

Detail assignment responded to 14 cases of Parking Meter trouble, and 572 emergency traffic signal complaints.

Replaced 30 old style Fire Alarm Box shells with new center pull break glass shells.

Repaired 12 Fire Alarm Box standards.

Converted 10 Fire Alarm Box services from overhead wire to underground cable.

Repaired or replaced 24 Fire Alarm Boxes damaged by vehicles.

Relocated 21 Fire Alarm Boxes.

Removed 322 Fire Alarm Boxes to Shop for repairs, and subsequently re-installed.

Maintained Fire Alarm System in the Broadway Tunnel for the Department of Public Works.

Cleared 169 cases of trouble on overhead fire alarm circuits.

Responded to complaints and made 15 repairs on outside local Fire Alarm Systems.

Conducted weekly tests of Market Street crossing bells.
Repaired bells at 9 locations.

Rebuilt underground cable pot heads at 21 Fire Alarm Boxes.

Replaced 550 feet of ½" conduit to Fire Alarm Boxes on wood poles.

Made repairs, alterations and improvements to overhead Fire Alarm System at 270 locations involving the installation of 192 crossarms and 76,600 feet of overhead line wire.

ELECTRICAL DIVISION

POLICE DEPARTMENT

Repaired and maintained Police Department's switchboard and related equipment at the new Hall of Justice and 79 telephones located within the building, and 469 call boxes located on the City streets, in parks and public buildings, and military and private police agencies.

Serviced and maintained the Police Teletype System; answered 48 complaints.

Serviced and maintained the following signal systems at the Hall of Justice:

Coroner's Intercom	Local Telephone Systems
Bank Alarm System	1) Chief of Police
Auxiliary Fire Alarm	2) City Jail Visitors
System	3) County Jail Visitors

Repaired 72 cases of trouble on the above systems.

Relocated 2 Police Call Boxes.

Repaired 3 damaged Police Call Boxes.

Repaired or removed to the Shop for repair 65 Police Call Boxes.

Replaced 510 feet of ½" conduit and wiring to Police Call Boxes mounted on wood poles.

Cleared 112 cases of trouble on overhead Police circuits.

Cleared 28 cases of trouble on underground Police circuits.

Made repairs, alterations and improvements to Police overhead lines at 50 locations, involving the installation of 24 cross-arms and 7,700 feet of overhead line wire.

CITY AND COUNTY RADIO SYSTEM

Tested and serviced once each week the two emergency generators and associated power plant equipment at the Central Radio Station, Christmas Tree Point, Twin Peaks.

ELECTRICAL DIVISION

Made quarterly inspections of both towers at the Central Radio Station for corrosion and required maintenance, and submitted reports to Radio Engineer. Removed and replaced bullet damaged antennas, installed new antennas and coaxial cable on No. 2 Tower, made temporary repairs to aircraft warning beacon at 150' level, damaged by bullets.

Installed barbed wire on parapet at base of both towers to deter sabotage.

Made daily visual check of all tower lights and entered same in log per Federal Communications Commission requirements.

Maintained the landlines between the Central Radio Station and the control units located in the Hall of Justice, Central Fire Alarm Station, and various other City departments who use the City and County Radio System in their daily operations.

DISASTER CORPS

Serviced, maintained and conducted weekly tests of the City's 53 Air Raid Sirens and associated remote control circuits and equipment. Located and cleared or reported to Pacific Telephone Co., for clearance 38 cases of trouble on Air Raid Sirens or control circuits. Maintained emergency power generators, batteries and associated electrical control equipment at the Civil Defense Control Center.

Disconnected Sirens on 13 occasions to permit Pacific Telephone and Telegraph Co., to work on cable without setting off Sirens.

Overhauled Sirens at two locations.

Inspected all Sirens for paint condition.

INSTALLATIONS, RELOCATIONS & REMOVALS

Wired new Police Van to provide lighting and power for communications.

Installed new Outside Local System for combined newspapers at Chronicle Building.

ELECTRICAL DIVISION

UNDERGROUND DISTRICTS, REDEVELOPMENT PROJECTS

RELOCATIONS FOR RAPID TRANSIT, FREEWAYS, ETC.

Department of Electricity facilities were converted from an Overhead to an Underground System in the following areas:

Golden Gateway Project	65%
------------------------	-----

Parker, Turk, Masonic, Stage I and II Underground District - 172	30%
---	-----

Gough St., California to Washington Underground District - 193	100%
---	------

Edgewood - Willard - Belmont Farnsworth Area, Underground District 194	100%
--	------

Fisherman's Wharf Area, Stage I Underground District 197	100%
---	------

12 th St., South Van Ness to Howard St. - Underground District 198	100%
--	------

Bay St., Midway to Taylor Underground District - 20	100%
--	------

Relocated Department of Electricity underground facilities for Rapid Transit District required prior to start of construction on the Spear Street ventilation shaft; also the cut and cover Crossover Box on Market between Bush and Pine Street.

Relocated Department of Electricity facilities to clear the Rapid Transit Right-of-Way in Balboa Park area between Ingleside Police Station and Ocean Avenue.

Relocated Department of Electricity overhead and underground facilities on a temporary basis to facilitate the widening of James Lick Freeway between Alemany Interchange and 23rd Street.

ELECTRICAL DIVISION

Performed numerous special jobs for auxiliary fire alarm companies and various contractors, installing conduit, cable and Master Fire Alarm Boxes required for connection to the Municipal Fire Alarm System.

This Division, as requested by the Redevelopment Agency, prepared preliminary plans and cost estimates for the installation of the Fire Alarm Police Call Box System in both Hunter's Point and Butchertown Redevelopment Projects.

Prepared plans and estimates for converting Department of Electricity facilities from overhead to underground in connection with the Department of Public Works Underground District Program for the fiscal year 1968-1969.

Repairs, alterations or improvements were made to Fire Alarm, Police and Traffic Underground Cable Systems at 319 locations requiring the installation of approximately 23,925 feet of cable and 1,700 feet of underground conduit.

Checked routing and overhead line clearance in connection with 21 House Moving Permits.

Surveyed and checked Department of Electricity underground facilities and marked locations on the surface of the street in connection with numerous track removal, sewer, water, and other street improvement projects.

Relocation of Department of Electricity facilities for various contractors to accommodate building construction during the fiscal year, amounted to \$10,789.

Maintenance services performed on a work order basis for other City Departments amounted to \$29,392.

Transferred Department of Electricity overhead lines to new poles at 56 locations as required by Pacific Telephone Co., and Pacific Gas and Electric Company, involving the installation of 26 crossarms and 6,200 feet of line wire.

Relocated Department of Electricity facilities on joint poles at 43 locations in order to provide clearance for cable being installed by Television Signal Corp.

* * * * *

ELECTRICAL DIVISION
SUMMARY OF TRAFFIC SIGNAL MAINTENANCE
FISCAL YEAR 1967-68
=====

The Traffic Signal Maintenance Division responded to a total of 3428 complaints requiring immediate attention. These complaints were received from various governmental agencies, both Municipal and State, private citizens, and from personnel of the Department of Electricity.

In addition, a planned program of preventive maintenance was followed as the work load allowed.

762 signalized intersections were maintained as of June 30, 1968.

Associated traffic control equipment was maintained as follows:

Walk-Wait Signals.....	992
Walk-Don't Walk Signals.....	96
No Left Turn Signs.....	22
Vehicle Pressure Detectors.....	570
Pedestrian Pushbuttons.....	432
Master Controllers.....	25
	<u>2,137</u>

Nineteen (19) new signal controlled intersections were added during the year, as follows:

<u>Intersection</u>	<u>Date in Service</u>
McAllister and Hyde	July 25, 1967
Ellis and Polk	Sept. 7, 1967
Ellis and Leavenworth	Sept. 7, 1967
Eddy and Leavenworth	Sept. 7, 1967
Ellis and Jones	Sept. 7, 1967
Eddy and Taylor	Sept. 7, 1967
Sutter and Hyde	Sept. 13, 1967
Geary and Hyde	Sept. 13, 1967
Geary and Jones	Sept. 13, 1967
Hayes and Divisadero	Sept. 18, 1967
21st and South Van Ness	Sept. 18, 1967
Bayshore and Bacon	Sept. 18, 1967
California and Taylor	Oct. 4, 1967
McAllister and Divisadero	Oct. 4, 1967
San Bruno and Silver	Nov. 30, 1967
14th and Castro	Jan. 16, 1968
Anza and Arguello	Jan. 16, 1968
20th and Illinois	May 28, 1968
Battery and Sacramento	June 25, 1968
Concourse Drive and Aquarium shut down	
October 11, 1967.	

ELECTRICAL DIVISION

Complaints by Month

<u>1967</u>		<u>1968</u>	
July.....	290	January.....	268
August.....	300	February.....	277
September.....	262	March.....	288
October.....	319	April.....	232
November.....	288	May.....	272
December.....	335	June.....	278

There were 162 complaints covering damage to Traffic Signals, requiring the replacement of the following equipment:

- 38 Conduits and wiring replaced and repaired.
- 16 10 Ft. marbelite poles.
- 24 10 Ft. steel poles.
- 38 Controller and/or base cabinets.
- 103 Signal heads.
- 186 Visors for signal heads.
- 26 Pedestrian signals.
- 145 Lens and reflectors.
- 3 Pedestrian pushbutton poles.
- 402 Signal heads were realigned after being struck by high vehicles.

PREVENTIVE MAINTENANCE

Material Exchanged for Shop Serviced Spares

Fixed Time Controllers	190
Actuated Time Controllers (Dispatchers)	311
Dial Units	103
Coordination Units	46
Relays	419
Pedestrian Timers	36
Flashers	11
Timers	11
Manual Cords	18
Detector Sensor Units	15

ELECTRICAL DIVISION

Repairs and Service in Field

Operation of Signals checked	680
Signal Heads serviced	140
Controllers serviced	113
Walk-Wait Signals serviced	93
Masters and Cascade Stations serviced	22
Masters and Cascade Stations A.M. 982 A.M. & P.M. Off-Set Operation checked 711 P.M.	1693
Defective wiring repaired	82
Pedestrian Pushbuttons changed	49
Adjustments and repairs to clear trouble	251
Adjusted or changed Cabinet Locks	23
Detector Frames repaired	9
Timing checked	32
Timing changed	41
Off-Sets checked	42
Off-Sets changed	20
Timing Cards at intersections installed	73
Detector Sensor Units adjusted	37
Repairs to Signals put out of order by Vandalism	48
Transformers replaced	13
67 Watt Traffic Lamps changed	9361
150 Watt Traffic Lamps changed	4
Neon Walk Tubes changed	145
Neon Wait Tubes changed	91

Equipment Repaired and Serviced in Shop

Fixed Time Controllers	219
Traffic Actuated Controllers	179
Dial Units	199
Coordination Units	41
Relays	802
Pedestrian Timers	48
Signal Heads	301
Master Controllers	-
Flashers	42
Manual Control Cords	18
Detector Units serviced	14
Made up New Controllers and Base Cabinets	36
Timers	11

ELECTRICAL DIVISION

Completed Work Orders and Service Orders in the amount of \$7,177. for improvements to signals as requested by the Traffic Engineering, Department of Public Works.

Maintained weekly lamp check of signal system.

Group relamped and serviced all Signal Heads at 193 intersections to reduce number of complaints of lamps out.

Replaced 63 Pressure Detector Pads. We have also installed Loop Detectors at several intersections to replace Pressure Detectors.

Conducted a bi-weekly test of Freeway Detour Signs controlled from the Central Fire Alarm Station.

Conducted weekly tests of ten (10) Cable Car Pre-empt Intersections, one (1) Cable Car Crossing, and one (1) Turn Table location.

Conducted a monthly test of the Fire Alarm Boxes and the Traffic Signal Pre-empt Circuits in the Broadway Tunnel.

Reset Time Clocks and Program Devices one hour ahead in April, and back one hour in October, at 28 locations to conform to the California State Daylight Savings Time.

* * * *

FIRE ALARM OFFICE

The Fire Alarm Office at 1003 Turk Street includes receipt of alarms and dispatching fire apparatus. It is responsible for the operation of the entire fire alarm telegraph system of San Francisco. Fire Alarm personnel also receive trouble complaints and dispatch repairmen in connection with emergency repairs to traffic signals, police and fire communication equipment, test defective circuits, and operate the Civil Defense air raid warning system.

Personnel assigned to the Fire Alarm Office consist of the following:

- 1 - Chief Fire Alarm Dispatcher
- 9 - Fire Alarm Dispatchers
- 4 - Senior Telephone Operators

The following summarizes the activities of the Central Fire Alarm Station for the year ending June 30, 1968:

First Alarms of Fire Received and Transmitted	17,259
Second " " " " " "	127
Third " " " " " "	41
Fourth " " " " " "	10
Fifth " " " " " "	2
Stills	11,621
Directs	1,034
Special Calls	<u>148</u> 30,242

Secondary Signals transmitted covering Alarms of Fire and routine operational business of the Fire Department.

145,005
179,247

Total Fire Alarm Boxes in service: 2,034

Total Police Boxes in service: 469

The following summarizes complaints received from the Police Department, other Municipal Agencies and private citizens concerning equipment listed below:

Fire Alarm Wire Trouble	279
Sirens	5
Police	209
Radio	28
Traffic Signals	3,428
Teletype	18
Miscellaneous	442
Registers	205
Outside Locals	<u>3</u>
	<u><u>4,617</u></u>

ADMINISTRATION AND ACCOUNTING

To properly control the operation of this Department and to comply with special regulations, restrictions, or limitations, it is incumbent upon the Administration Division to prescribe the most effective methods and procedures for record-keeping requirements. The two most important legal provisions are those relating to (1) budgeting, and (2) funds.

Proper budgetary accounting involves not only the control of expenditures in accordance with legal provisions, but also the compilation of forecasting data on a cost or statistical basis over a period of time. The purpose is to produce financial information in a form that is readily useful to all interested parties.

For this reason, the Administration Division maintains an internal account system which records and provides cost data for the purpose of (1) securing information to be used in estimating the expenditures for a fiscal period, (2) prepare financial statements, (3) compiling accurate comparative financial statistics, (4) controlling appropriations to insure that money will be expended for designated purposes, the amount to be spent, and the period of time during which the expenditures are to be made.

In summary, it can be concluded that an adequate system must furnish meaningful and workable information for management planning and control. Good financial reporting is to be found only where detailed requirements are practiced. Here is the foundation on which to build continuity and comparability to (1) ensure budgetary control, (2) determine the real cost of providing the service, (3) compare the cost of service from one period to another, (4) facilitate analysis or interpretation by management.

Personnel assigned to Administration include General Manager, Senior Accountant, Accountant, Account Clerk, Principal Clerk-Stenographer, Senior Clerk-Stenographer, Clerk-Stenographer, General Clerk-Typist, and Storekeeper.

STATEMENT OF APPROPRIATED AND OTHER FUNDS

YEAR ENDING JUNE 30, 1968

	<u>Allowance</u>	<u>Cost</u>	<u>Balance</u>
<u>Administration & Operation:</u>			
Personal Services	\$ 244,757	230,669	14,088
Contractual Services	20,015	19,674	341
Materials & Supplies	1,150	1,150	-
 <u>Maintenance & Construction:</u>			
Personal Services	1,076,043	1,071,282	4,761
Contractual Services	13,166	12,538	628
Materials & Supplies	104,634	103,346	1,288
Equipment	8,595	7,697	898
Total Operating Budget	\$ 1,468,360	1,446,356	22,004
 <u>Job Cost Work Orders - Interdepartment</u>			
Electrical	106,004	29,392	76,612
Mechanical	52,048	20,230	31,818
Radio Communication	45,894	42,184	3,710
 <u>Job Cost - Private Contractors</u>			
Traffic Signal	12,257	10,404	1,853
Fire & Police Communication	1,744	385	1,359
 <u>Continuing Appropriations</u>			
Installation Fund	13,162	7,418	5,744
Total Funds Received in 1967-68	\$ <u>1,699,469</u>	<u>1,556,369</u>	<u>143,100</u>

ESTIMATED AND ACTUAL REVENUES

1967 - 1968

	<u>Estimated Revenue</u>	<u>Actual Revenue</u>
(A) Damage to Traffic Signals	22,500	29,882
(B) Damage to Parking Meters, Police & Fire Alarm Boxes	7,750	7,072
(C) Housemoving Electrical Inspection	450	298
(D) Loudspeaker on Vehicles	126	148
(E) Police Terminal Alarm Panel	4,488	4,727
(F) Off Premise Fire Alarm Locals	<u>2,970</u>	<u>3,164</u>
Total Revenues	<u>38,184</u>	<u>45,191</u>

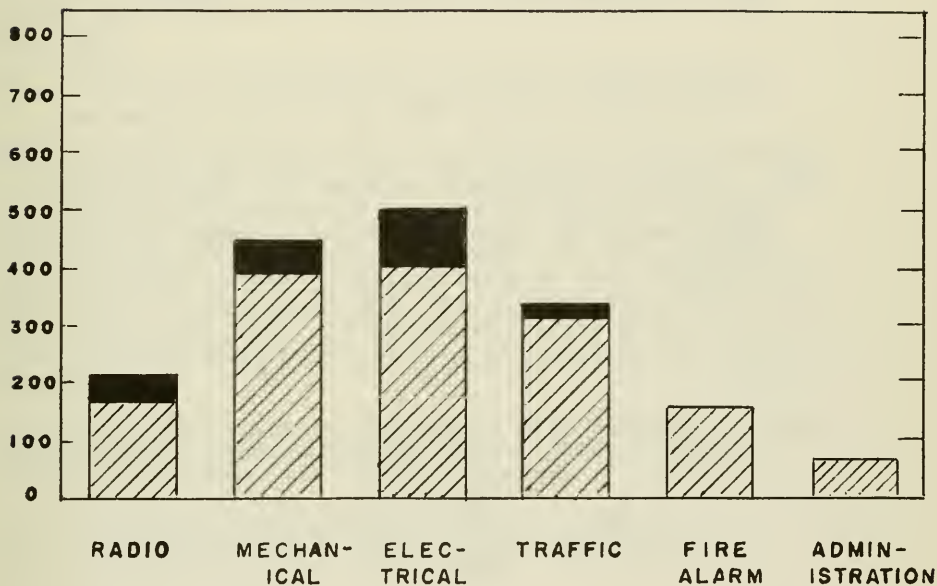
COMMENTS

- (A) Funds transferred from Road Fund to General Fund, Department of Electricity per Annual Appropriation Ordinance. Therefore, recovery of damages are deposited to Road Fund, as an offset to funds transferred.
- (B) Recovery of damages are deposited to General Fund.
- (C) The housemover shall pay to the Department of Electricity the actual cost of inspecting the overhead line wires. The minimum cost is \$9.39 for each inspection.
- (D) Individuals or firms installing a loudspeaker system on vehicles shall pay to the Department of Electricity \$3.50 per month for the inspection of each sound amplifier and its audio quality.
- (E) Firms engaged in the business of installing and maintaining security alarm systems shall pay to the Department of Electricity \$2.75 per month for each connection to the Police Terminal Alarm Panel.
- (F) Firms engaged in the business of installing electric apparatus in connection with the Fire or Police Telegraph and Telephone System shall pay to the Department of Electricity the actual cost but not less than a minimum of \$10.00.

SOURCE AND USE OF FUNDS

1967 - 1968

\$ THOUSANDS



OPERATING BUDGET



JOB COST WORK ORDERS

TOTAL SOURCE - 1.70 MILLION

TOTAL USE - 1.56 MILLION

DEPARTMENT OF ELECTRICITY

SAFETY COMMITTEE

The Department of Electricity Safety Committee, composed of eight members, met during the year regularly each month, and minutes were written up after each of the meetings.

Two items were recommended and within a short period of time taken care of and deleted from the minutes.

It is now the practice of the Committee to record safety suggestions under the section "Informative Notes". The Secretary discusses these suggestions with the General Manager who corrects or adjusts any unsafe conditions with dispatch. It is also the policy of the committee that any suggestions on safety brought to our attention must first be discussed with the supervisor of the particular division. At the moment there are no suggestions pending that have not been attended to in the Department.

Eighteen (18) Industrial Accidents were reviewed by the committee and recommendations made. Seven of these accidents involved lost time from work.

Course in Mouth-to-Mouth Breathing was given by Mr. A. Kuerstan to personnel of the Department of Electricity November 1 and 2, 1967.

Sixteen (16) personnel of the Department of Electricity received completion cards in Driver Training Improvement Course February 1, 1968; four personnel also completed this course May 28th, 1968.

The Coordinator and the Secretary of the Safety Committee represented the Department of Electricity at the Governor's Industrial Safety Conference at the Fairmont Hotel on February 7th and 8th, 1968. The Secretary also attended the California Safety Congress and Exhibits at the Jack Tar Hotel, March 6th and 7th, 1968.

The General Manager and members of the Safety Committee express their appreciation to the San Francisco Chapter of the National Safety Council for the assistance afforded during the year.

RETIREMENT COMMITTEE

Our Retirement Committee is employee oriented and consists of representatives of the various Divisions and classifications working in our Department. There have been selected from the group a permanent treasurer and a permanent secretary with the chairmanship rotating to the Division within which the retiree is assigned.

During the year the Retirement Committee arranged for ceremonies honoring six retirees:

<u>Name</u>	<u>Date Retired</u>	<u>Classification</u>	<u>Years of Service</u>
Jevicky,Anthony	9-1-67	Janitor	13
McLaughlin,Albert	1-1-68	Chief Fire Alarm Dispatcher	28
Hill, J.B.(Ben)	2-1-68	Communication Lineman General Foreman	20
Biddle,Josephine	3-1-68	Sr.Clerk-Stenographer	16
Wenham, Grace	3-29-68	Sr.Clerk-Stenographer	13
Meany, John	6-28-68	Lineman	18

DEPARTMENT OF ELECTRICITY

DOCUMENTS

SEP 20 1969

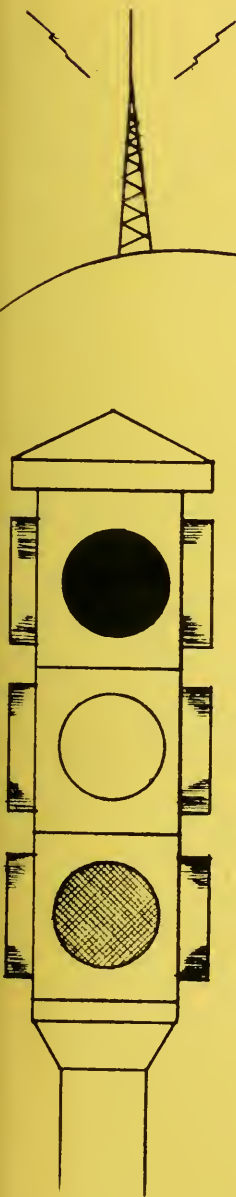
SAN FRANCISCO
PUBLIC LIBRARY

ANNUAL REPORT. YEAR

ENDING

JUNE 30

1969



August 14, 1969

Mr. Thomas J. Mellon
Chief Administrative Officer
City and County of San Francisco
289 City Hall
San Francisco, California 94102

Dear Mr. Mellon:

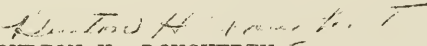
I am submitting the Annual Report of the Department of Electricity for the Fiscal Year 1968-1969 in compliance with the provisions of Section 20 of the Charter of the City and County of San Francisco.

During the past year, there have continued to be further expansions in all areas of our responsibility with a resulting increase in work for our employees.

I wish to thank the dedicated employees of our Department for making it possible to continue to maintain a uniformly high degree of service for all City Departments.

I appreciate and thank you and your staff for the understanding and cooperation extended this Department in the past year.

Respectfully submitted,


BURTON H. DOUGHERTY
General Manager
Department of Electricity



ANNUAL REPORT
DEPARTMENT OF ELECTRICITY
CITY AND COUNTY OF SAN FRANCISCO
FISCAL YEAR 1968-1969

HON. JOSEPH L. ALIOTO
MAYOR

THOMAS J. MELLON
CHIEF ADMINISTRATIVE OFFICER

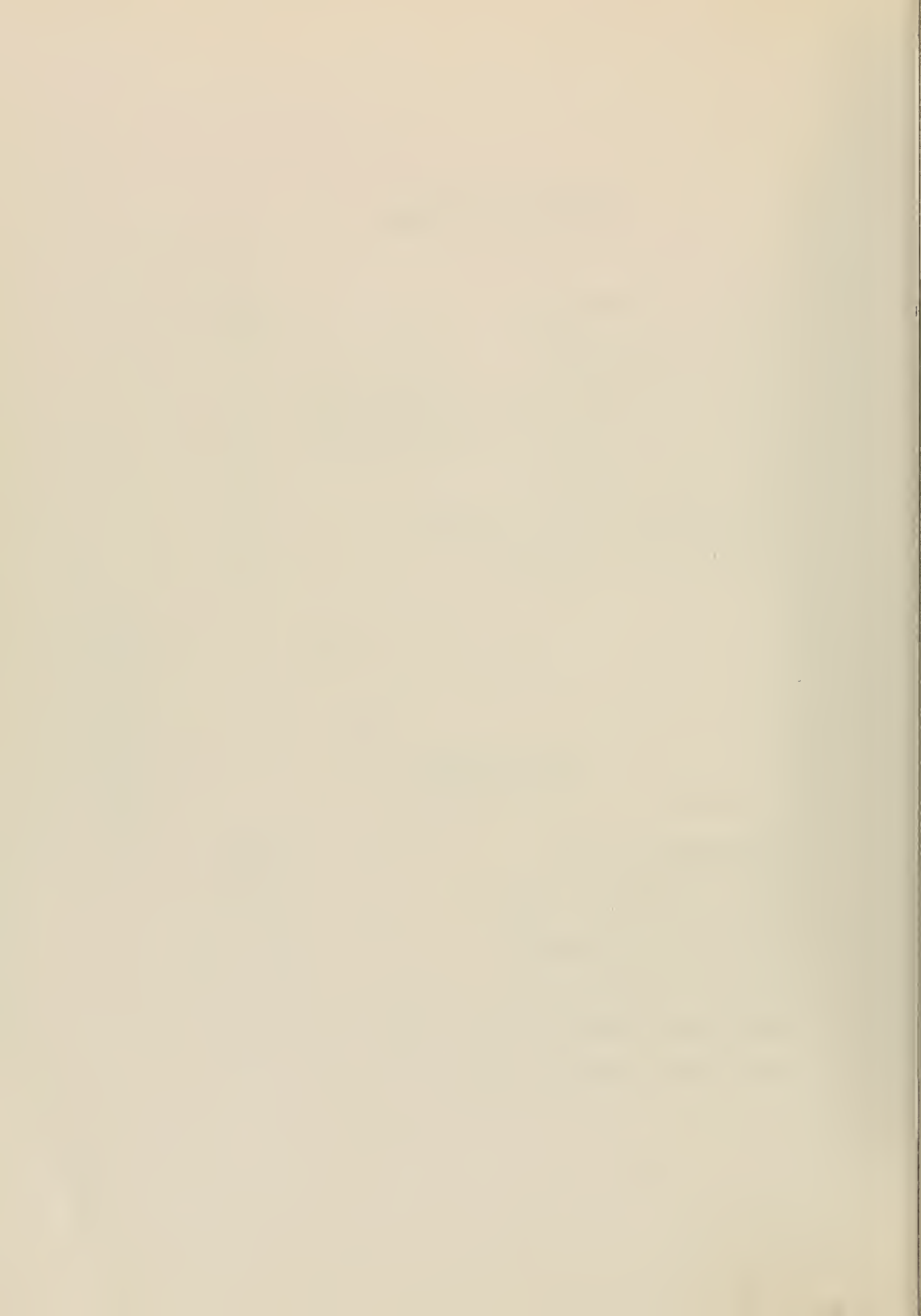
BURTON H. DOUGHERTY
GENERAL MANAGER

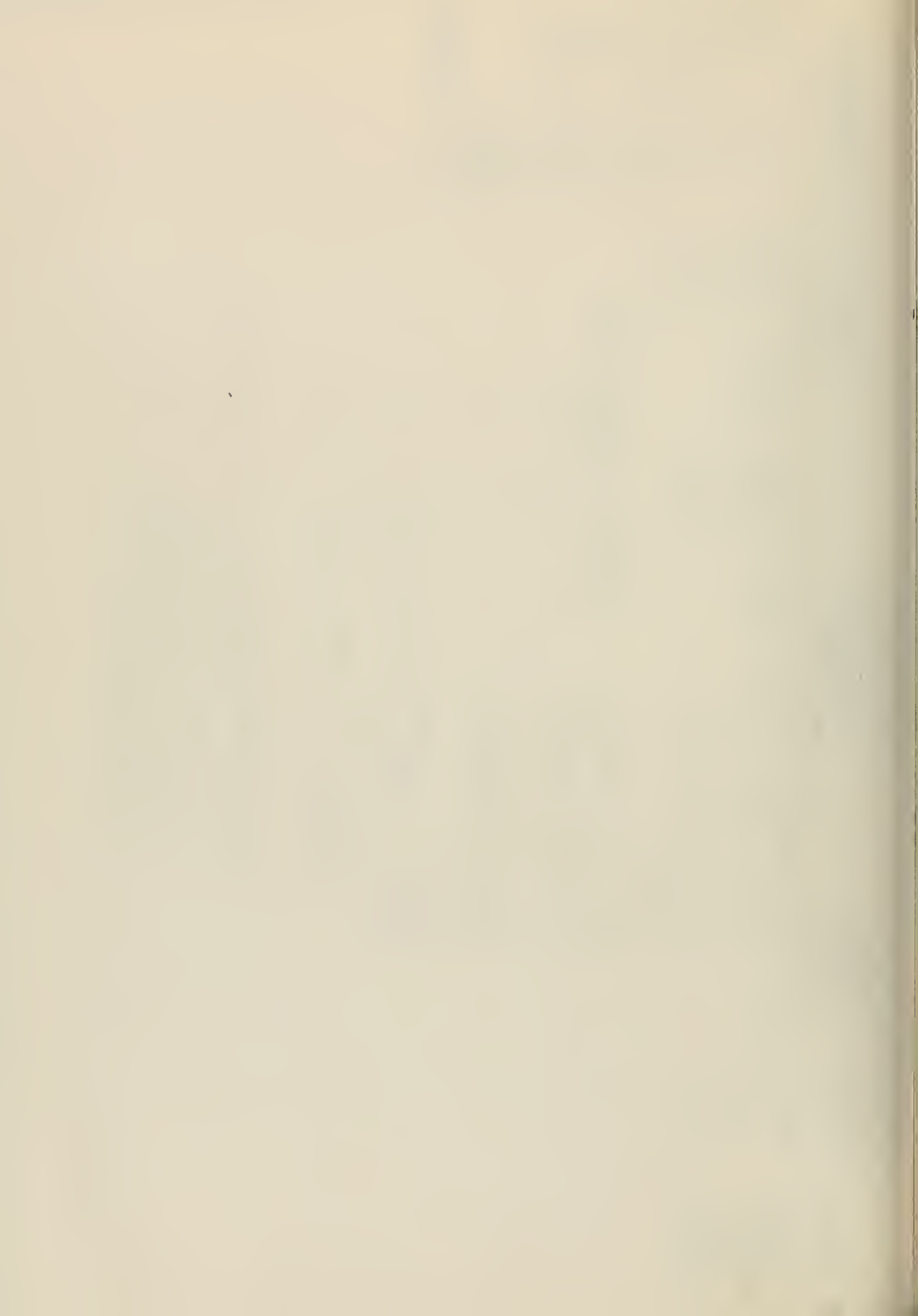
TABLE OF CONTENTS

LETTER OF TRANSMITTAL	FRONT
RADIO COMMUNICATION	1
ELECTRICAL MAINTENANCE & CONSTRUCTION	12
MECHANICAL MAINTENANCE & MANUFACTURE	25
FIRE ALARM OPERATION	36
ADMINISTRATION AND ACCOUNTING	37
DEPARTMENTAL COMMITTEES	42

ILLUSTRATIONS

ORGANIZATION CHART	FRONT
NEW POLICE RADIO SYSTEM	7 - 8
ELECTRICAL MAINTENANCE	18 - 19
MECHANICAL MAINTENANCE	31 - 32
FUNCTIONAL ALLOCATION PIE CHART	38
FUNCTIONAL COST BAR CHART	40





RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1968-69

Responsibility: Design, provide, install and maintain communication systems and associated facilities for various departments, divisions and services of the City and County of San Francisco.

POLICE DEPARTMENT

Services were performed for the Police Department as follows:

Maintenance and repair services at the Radio Shop, 901 Rankin St.

Maintenance and repair services at various outlying locations.

Federal Communications Commission frequency, deviation and power measurements.

Installation of equipment in new or replacement vehicles.

Removal of equipment from obsolete vehicles.

Respond to emergency service calls during off-duty hours.

Perform preventive maintenance and periodical testing of Disaster Corps communications equipment and associated facilities.

RADIO DIVISION

Microwave System

This system that operates between the Hall of Justice, Central Radio Station and the Central Fire Alarm Station has been completed. The system serves as a back-up for landline control between the primary base station, located at the Central Radio Station and central points located at the Hall of Justice and the Central Fire Alarm Station.

New 460 - 465 MHz System

This system is in the process of being developed. Specifications have been written to cover the first phase of the operation which will serve as a nucleus of the over-all system. The second and third phase will encompass various base (mobile relay) stations, strategically located to provide personalized instantaneous communications from headquarters to each foot patrolman or officer in the field.

Antenna Systems have been installed at the Central Radio Station for all-City coverage; at Lafayette Square for Northern Police District coverage and at Moffitt Hospital for Park Police District coverage. Various radio frequency propagation surveys have been made to determine the most advantageous locations for additional base (mobile relay) stations.

New Base Station

This station was installed at the stable in Golden Gate Park to operate in the 45 MHz police network.

Port Authority transfer of Radio Equipment

The State of California transferred communications equipment, employed by the Port Authority, to the City and County of San Francisco. The equipment consisted of one (1) base station located at the Ferry Building and four (4) mobile units. The stations were relicensed and incorporated into the 45 MHz police network.

RADIO DIVISION

MUNICIPAL RAILWAY

Frequency compatability tests were run to determine the degree of intermodulation between Central Radio Station frequencies and Municipal Railway newly acquired radio communications frequencies.

New Public Address Systems were installed at nine (9) locations.

DISASTER CORPS

Radiological Monitoring Kits, at various key locations, were exchanged for modified kits.

A Radio Frequency Survey was run between major hospitals to determine power requirements for a proposed Hospital Disaster Communications Net.

Matching fund applications were prepared for the alert system (sirens) and radio communications maintenance.

Periodical tests were performed for all "standby" alerting and communications equipment.

Communications Annex was prepared and approved by Local, State and Federal Civil Defense Offices.

The Attack Warning System (bell and lights) was revised in accordance with State and Federal regulations.

DEPARTMENT OF ELECTRICITY

Additional underground conduit between the Central Radio Station and Tower No. 2 was installed to accommodate additional antennas proposed for new services.

Various radio frequency propagation surveys were run utilizing proposed new base station sites in various districts.

RADIO DIVISION

San Francisco was represented at Frequency Advisory Committee meetings (one each month) at various Northern California locations.

Forty (40) base and mobile station licenses were renewed by the Federal Communications Commission.

Estimates and requisitions were prepared upon request from various departments.

RADIO SHOP ACTIVITIES

Mobile Communications Units Serviced in Radio Shop:

2971 - Repaired.
177 - Installed.
148 - Removed (stripped).
2390 - Federal Communications Commission calibrations.

450 - Preventive maintenance services at various locations.

686 - Special non-recurring projects.

Departmental Services were Performed at Locations as Shown:

Police Department

244 - Hall of Justice.
64 - Central Radio Station.
7 - Bernal Heights.
49 - District Base Stations.

Fire Department

119 - Central Fire Alarm Station.
50 - Central Radio Station.
49 - District Base Stations.
138 - Secondary Stations.
336 - Heavy Apparatus.
18 - Boats.
4 - Airport.
6 - Fire Headquarters.

RADIO DIVISION

Municipal Railway

- 25 - Central Radio Station.
- 12 - Headquarters (Presidio Ave.)
- 5 - Forest Hill.
- 6 - Twin Peaks Blockhouse.
- 1 - Geneva Avenue Yard.
- 2 - Mariposa St. Yard.
- 3 - Kirkland St. Yard.

Water Department

- 21 - Newcomb St. Yard.
- 24 - Bernal Heights.
- 13 - Central Radio Station.
- 5 - Headquarters (Mason St.).
- 2 - Lake Merced Pump Station.

Dept. of Electricity - Local Government

- 31 - Central Radio Station.
- 12 - Central Fire Alarm Station.
- 6 - 901 Rankin Street.
- 1 - Bernal Heights.

Dept. of Public Works

- 10 - Central Radio Station.
- 6 - Army St. Yard.
- 3 - Boats.

Supervisors

- 24 - City Hall.

Harbor Police

- 2 - Ferry Building.

Pawn Shops

- 7 - Various Locations.

RADIO DIVISION

Disaster Corps

- 1 - Emergency Operating Center.
- 1 - Hall of Justice.

Housing Police

- 1 - Kirkwood St.

WORK ORDERS - 1968-69

<u>Work Order #</u>	<u>Date</u>	<u>Dept.</u>	<u>Amount</u>	<u>Purpose</u>
8-336	7-19-68	Police	\$ 8,330.65	Strip, modify & reinstall 18 solo motorcycle radios. Strip, modify & reinstall 18 servi-car motorcycle radios.
8-534	8-20-68	Police	35,370.00	Provide 36 two-way portable radio units and 7 multi-battery chargers.
8-533	8-20-68	Fire	15,500.00	Provide and install eleven (11) mobile radio units.
8-969	10-28-68	D.P.W.	1,000.00	Provide and install radio unit in truck.
8-7174	3-12-69	Muni Rwy.	1,600.00	Install Public Address system at nine (9) locations.
8-8533	5-21-69	D.P.W.	1,000.00	Provide and install radio; remove and reinstall 2nd radio.
8-8686	5-19-69	Police	300.00	Antenna structure evaluation
8-8787	6-16-69	Police	30,823.00	Provide and install two (2) District Base Stations. Provide and install one (1) Base Mobile Radio System.
8-8766	6-4-69	Police	1,688.36	Provide and install helicopter radio unit.
8-8788	6-16-69	Sheriff	850.00	Provide and install Local Government radio unit.
8-8667	5-19-69	Health	800.00	Provide and install Police radio unit
8-8844	7-2-69	Health	1,900.00	Provide and install two (2) Police radio units (supplemental to #8-8667).

NEW POLICE RADIO SYSTEM



Design for Police Radio System



System Design completed



Police antenna at U.C.Hospital



Central Radio Station antenna

NEW POLICE RADIO SYSTEM



Installing antenna at Coit Tower



Police antenna atop Coit Tower



Installing antenna at Lafayette
Park



Police antenna at Lafayette
Park

RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1968-69

EMPLOYEE COMPLEMENT

NUMBER OF
EMPLOYEES

TITLE

CLASS

1	Radio Engineer	5246
2	Sr. Radio Technicians	7368
8	Radio Technicians	7367

PERCENTAGE OF LABOR ALLOCATED

<u>DEPARTMENT</u>	<u>%5246</u>	<u>%7368</u>	<u>%7367</u>	<u>Hours Overtime</u>
POLICE	46	64.94	42.49	148½
FIRE	13	33.95	24.82	63
DEPT. OF PUBLIC WORKS	5	-	1.24	4
ELECTRICITY	19	1.11	19.03	12½
HEALTH	2	-	1.10	-
CORONER	2	-	.25	-
MUNICIPAL RAILWAY	3	-	5.46	-
WATER	3	-	4.26	-
DISASTER CORPS	4	-	.72	-
SUPERVISORS	1	-	.30	-
MAYOR	1	-	.02	-
MISCELLANEOUS	1	-	.31	-

Hours Overtime	228
Days (Temporary Employees)	554
Days (Vacation Relief)	
Class 7368	38
Class 7367	141

RADIO DIVISION

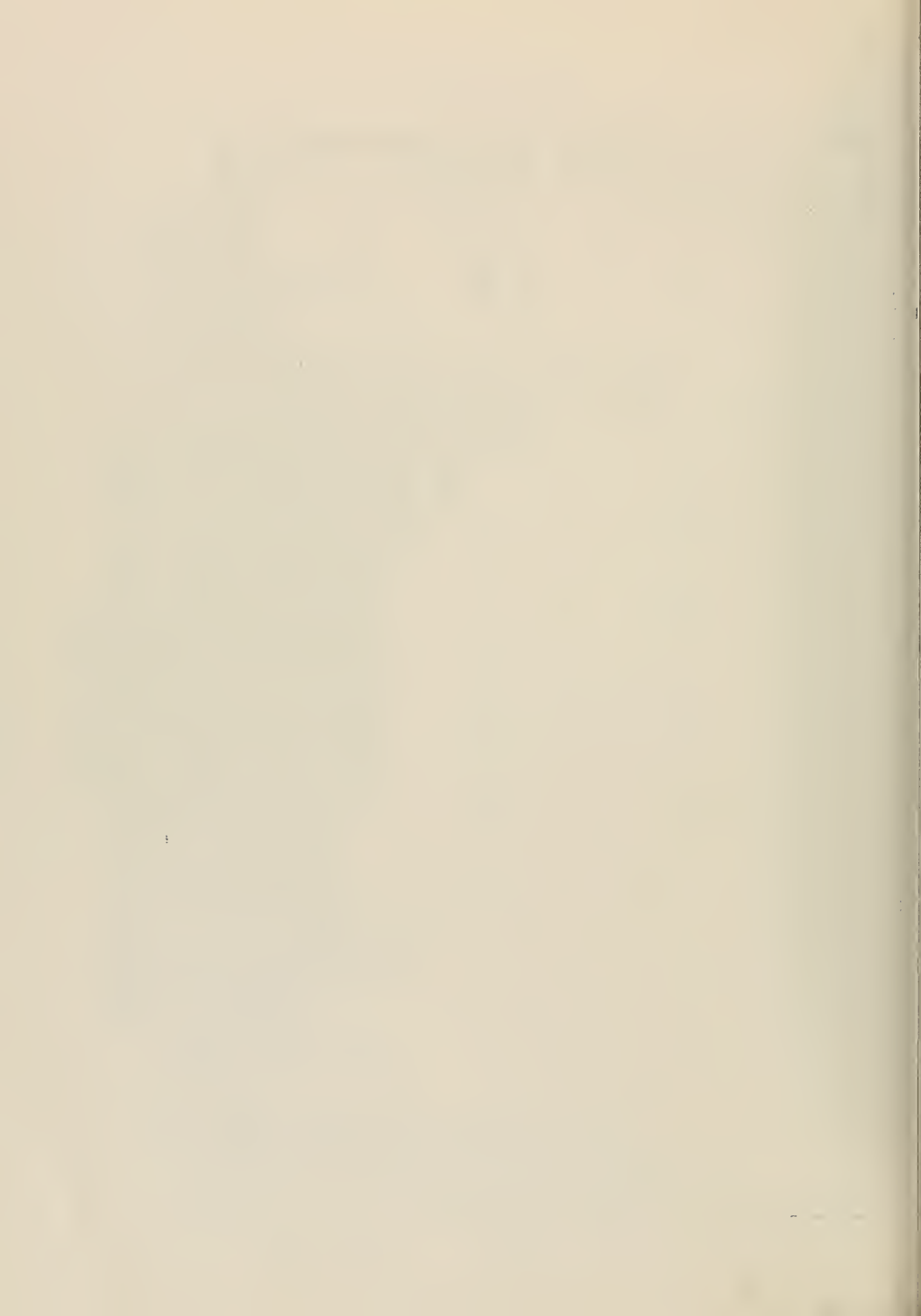
MOBILE TWO-WAY RADIO EQUIPMENT SERVICED AND MAINTAINED FISCAL YEAR 1968-69

<u>Department</u>	<u>No. of Vehicles</u>	<u>No. of Radios</u>	<u>Total Radios</u>
<u>Police</u>			
Cars and Trucks	273	277	
Solo Motorcycles	90	90	
Servicar Motorcycles	79	79	
Helicopter	1	1	
Command Car	1	7	
Portable	-	37	491
<u>Fire</u>		(2 in	
Cars and apparatus	163	165 Police Cars)	
Fire Boat	2	3	
Command Car	1	5	
Portable		52	225
<u>Water</u>			
Cars and Trucks	93	93	
Portable		2	95
<u>Dept. of Public Works</u>			
Cars and Trucks	48	48	
Portable		4	52
<u>Local Government</u>			
Cars and Trucks	32	32	32
<u>Municipal Railway</u>			
Cars and Trucks	42	42	
Coaches	15	15	57
<u>Health</u>			
Ambulances	13	13	
Station Wagon	1	1	
Portable		4	18
<u>Special Police</u>			
Cars	12	12	
Three Wheel Motorcycles	1	1	13
<u>Society for Prevention of Cruelty to Animals</u>			
Cars and Trucks*	8	8	8
<u>Disaster Corps</u>			
Cars	3	6	
Communications Van	1	11	
Portable		2	19
<u>Miscellaneous Services</u>			
Mayor-2, Coroner-4, Housing Police-2, Chief Administrative Officer-1, Chaplain-2, Police Commissioners-3, Fire Commissioners-3, *Federal Bur. of Investigation-3, Harbor Police-4.			
*FCC alignment only		Total	24 1034 1022

RADIO DIVISION

MOBILE TWO-WAY RADIOS SERVICED AND MAINTAINED
FISCAL YEAR 1968-69

DEPARTMENT	NUMBER OF VEHICLES					
	50	100	150	200	250	300
POLICE	////	////	////	////	////	////
FIRE	////	////	////	////	////	////
POLICE (MC)	////	////	////	////	////	////
WATER	////	////	////	////	////	////
MUNI RMY	////	////	////	////	////	////
PUBLIC WORKS	////	////	////	////	////	////
DEPT. OF ELECT.	////	////	////	////	////	////
HEALTH	////	////	////	////	////	////
DISASTER	////	////	////	////	////	////
MISC.:	////	////	////	////	////	////
Sp. Police	////	////	////	////	////	////
SPCA	////	////	////	////	////	////
Commissioners	////	////	////	////	////	////
Coroner	////	////	////	////	////	////
Housing	////	////	////	////	////	////
Chaplains	////	////	////	////	////	////
Mayor	////	////	////	////	////	////



ELECTRICAL DIVISION
SUMMARY OF WORK PERFORMED
==FISCAL YEAR 1968-1969==

CONSTRUCTION, MAINTENANCE AND REPAIR OF:

Central Fire Alarm Station, includes standby generator, rectifiers, main batteries and all electrical fire alarm communication apparatus and circuitry.

Circuits from Central Fire Alarm Station to 2038 Fire Alarm Boxes located in the City streets; testing of each box at 60 day intervals.

Auxiliary Fire Alarm Systems in 127 Public Schools - includes inspection and testing of each school with Central Fire Alarm Station on a monthly basis.

Police Department Emergency Telephone System, consisting of a switchboard and circuits to 469 Police Call Boxes on the City streets and 79 locals in the Hall of Justice and various Bureaus and Police Stations.

Police Teletype System which includes two teletype transmitters and control consoles located in the Hall of Justice with circuits to 22 printers located in the Hall of Justice and to various Bureaus and Police Stations in the City.

Bank Alarm System, Private Local Telephone Systems and Communication Alarm and Signal Systems in the Hall of Justice.

Traffic Signals and associated underground control cables at 765 intersections.

Air Raid Sirens at 53 locations and associated remote control equipment.

Overhead lines and underground cable system through the City's 49 square mile area.

Auxiliary Fire Alarm Systems: this Division approves, tests, and supervises the connection of Auxiliary Fire Alarm Systems to the Municipal Fire Alarm System by the Auxiliary Fire Alarm Companies legally authorized by franchise or permit to engage in auxiliary fire alarm business in San Francisco.

ELECTRICAL DIVISION

PERMANENT PERSONNEL

- 1 - 7131, Electrical Maintenance and Construction Superintendent
- 1 - 5238, Associate Electrical Engineer
- 1 - 5352, Electrical Draftsman
- 1 - 7273, Lineman General Foreman
- 1 - 7257, Lineman Foreman
- 13 - 7338, Linemen
- 3 - 7308, Cable Splicers
- 1 - 7276, Electrician General Foreman
- 2 - 7238, Electrician Foremen
- 14 - 7345, Electricians
- 4 - 7514, General Laborers

Days worked by temporary personnel in the Electrical Division during the fiscal year due to work orders, special projects, vacation relief, and retirements.

7257 Lineman Foreman	109 Days
7338 Lineman	701 "
7308 Cable Splicer	254 "
7345 Electrician	238 "
7215 Laborer Foreman	90 "
7514 Laborer	176 "

FIRE ALARM SYSTEM

Maintained fire alarm equipment in the Central Fire Alarm Station and in 48 Fire Stations; also maintained the communication systems connecting these facilities.

Repaired or replaced in Fire Stations:

- 156 - Registers
- 63 - Bells
- 43 - Relays
- 43 - Automatic Light Switches
- 31 - Intercommunication Systems

Inspected and tested with the Central Fire Alarm Station 2038 Fire Alarm Boxes at least once every 60 days.

ELECTRICAL DIVISION

Inspected, serviced and tested with the Central Fire Alarm Station the Auxiliary Fire Alarm System in 127 Public Schools at least once each month.

Responded to Schools on 52 occasions in regard to complaints or to assist school district personnel with trouble on the Local Fire Alarm or the Auxiliary Fire Alarm System.

Replaced 28 old style Fire Alarm Boxes with modern 3-fold non-interfering type Fire Alarm Boxes.

Detail assignment responded to 11 cases of Parking Meter trouble, and 534 emergency traffic signal complaints.

Repaired 33 Fire Alarm Box standards.

Converted 6 Fire Alarm Box services from overhead wire to underground cable.

Repaired or replaced 61 Fire Alarm Boxes damaged by vehicles.

Relocated 13 Fire Alarm Boxes.

Removed 253 Fire Alarm Boxes to Shop for repairs, and subsequently re-installed.

Maintained Fire Alarm System in the Broadway Tunnel for the Department of Public Works.

Cleared 128 cases of trouble on overhead fire alarm circuits.

Responded to complaints and made 28 repairs on outside Local Fire Alarm Systems.

Conducted weekly tests of Market Street crossing bells. Repaired bells at 9 locations.

Rebuilt underground cable pot heads at 33 Fire Alarm Boxes.

Replaced 760 feet of 1/2" conduit to Fire Alarm Boxes on wood poles.

Made repairs, alterations and improvements to overhead Fire Alarm System at 250 locations involving the installation of 229 crossarms and 47,700 feet of overhead line wire.

ELECTRICAL DIVISION

POLICE DEPARTMENT

Repaired and maintained Police Department's switchboard and related equipment at the new Hall of Justice and 79 telephones located within the building, and 469 call boxes located on the City streets, in parks and public buildings, and military and private police agencies.

Serviced and maintained the Police Teletype System; answered 39 complaints.

Serviced and maintained the following signal systems at the Hall of Justice:

Coroner's Intercom	Local Telephone Systems
Bank Alarm System	1) Chief of Police
Auxiliary Fire Alarm	2) City Jail Visitors
System	3) County Jail Visitors

Repaired 82 cases of trouble on the above systems.

Relocated 2 Police Call Boxes.

Repaired or removed to the Shop for repair 100 Police Call Boxes.

Replaced 120 feet of ½" conduit and wiring to Police Call Boxes mounted on wood poles.

Cleared 40 cases of trouble on overhead Police circuits.

Cleared 51 cases of trouble on underground Police circuits.

Made repairs, alterations and improvements to Police overhead lines at 57 locations, involving the installation of 32 cross-arms and 6,500 feet of overhead line wire.

CITY AND COUNTY RADIO SYSTEM

Tested and serviced once each week the two emergency generator and associated power plant equipment at the Central Radio Station, Christmas Tree Point, Twin Peaks.

Made quarterly inspection of both towers at the Central Radio Station for corrosion and required maintenance.

ELECTRICAL DIVISION

Replaced aircraft warning beacon damaged by bullets on one tower at the 150' level.

Installed new antennas and coaxial cables on towers at the Central Radio Station, on a pole in Lafayette Square and on top of U. C. Hospital for New Police Radio System.

Made daily visual check of all tower lights and entered same in log per Federal Communications Commission requirements.

Maintained the landlines between the Central Radio Station and the control units located in the Hall of Justice, Central Fire Alarm Station, and various other City departments who use the City and County Radio System in their daily operations.

DISASTER CORPS

Serviced, maintained and conducted weekly tests of the City's 53 Air Raid Sirens and associated remote control circuits and equipment. Located and cleared or reported to Pacific Telephone Co., for clearance 24 cases of trouble on Air Raid Sirens or control circuits. Maintained emergency power generators, batteries and associated electrical control equipment at the Civil Defense Control Center.

Disconnected Sirens on 9 occasions to permit Pacific Telephone and Telegraph Co., to work on cable without setting off Sirens.

Overhauled Sirens at four locations.

Inspected all Sirens for paint condition.

UNDERGROUND DISTRICT - PROGRAM

Department of Electricity facilities were converted from an overhead to an underground system in the following areas:

Golden Gateway Project	80%
Russian Hill - Stage I Underground District #176	100%
Fisherman's Wharf - Stage II Underground District #197	100%

ELECTRICAL DIVISION

Bay, Mason, Powell, Stockton	100%
Burnett Avenue	100%
Dixie Alley to Twin Peaks	
17th and Clayton	70%
Funston Avenue	100%
Quintara to Rivera	
Indiana St. - Stage I	70%
Underground District #203	
Mira Glen Subdivision	100%

Prepared plans and estimates for converting Department of Electricity facilities from overhead to underground systems at the following locations in conjunction with Department of Public Works 1969-1970 underground district program:

Russian Hill Area - Stage I
Underground District #176

Pennsylvania, Mariposa, Illinois,
Army - Stage III
Underground District #203

Indiana Street
372' South of 23rd to 22nd

23rd Street
Indiana to 3rd Street

Pierce Street
Underground District #250

North Waterfront Area
Stage I

Alamo Square - Stage I

Bernal Heights Area - Stage I

Duboce Triangle - Stage I



Preparing plans for future project



Installing conduit and foundation for traffic controller



Installing section of fire alarm cable



Cable Splicer identifying pairs prior to splicing cable

ELECTRICAL DIVISION



Testing new solid state traffic control equipment



Rewiring master traffic control cabinet



Assembling traffic signal heads for installation



Checking map for location and type of signalized intersection

ELECTRICAL DIVISION

Hyde Street - Union to Chestnut

Webster Street - Golden Gate to Grove

Cow Hollow - Stage I

Mason Street - Sacramento to Pacific

Francisco Street - Hyde to Columbus

UNDERGROUND DISTRICT SURVEY

At the request of the Department of Public Works we surveyed the entire City and prepared maps showing our existing overhead and underground duct and conduit facilities. Also prepared drawings showing underground conduit that will have to be installed in future years to replace the existing overhead Fire Alarm and Police Communication Circuits on Pacific Gas and Electric and Pacific Telephone poles throughout the City.

RAPID TRANSIT

Relocated on a temporary basis Department of Electricity cables on Market Street as required to facilitate construction of the Davis Street Station.

Prepared plans and estimates for relocating Department of Electricity cables on Market Street required in order to construct outer Market Street Subway from Van Ness Avenue Station through Duboce Avenue Portal.

FREEWAYS

Relocated Department of Electricity cable due to freeway construction at San Bruno and Ordway.

Prepared plans and estimates for the relocation of Department of Electricity facilities due to freeway construction at the following locations:

6th Street to 3rd Street

3rd Street to Harrison

ELECTRICAL DIVISION

AUXILIARY FIRE ALARM CONNECTIONS

Installed Master Fire Alarm Box, associated conduit and wiring, and supervised connection of Auxiliary Fire Alarm Systems to the Municipal Fire Alarm System at the following locations:

St. Francis Hospital
Franklin Hospital
Irving M. Scott School
School of Dentistry - 2155 Webster St.
Board of Education Warehouse
804 Toland Avenue

Relocated Fire and Police cables on 6th Street between Bryant and Brannan due to sewer construction.

Relocated Fire Alarm and Police Call Boxes and associated conduit and wiring due to building or street construction as follows:

Cowell Hall - Golden Gate Park
Bush and Grant - Chinatown Gateway
Van Ness and Bay Street
Hilltop and Parnassus Avenue

Repairs, alterations or improvements were made to our underground cable system at 219 locations requiring the installation of approximately 27,043 feet of cable and 2,550 feet of underground conduit.

Surveyed and checked Department of Electricity underground facilities and marked locations on the surface of the street in connection with numerous sewer, water, and street improvement projects.

Checked routing and overhead line clearances in connection with housemoving permits.

Relocated Department of Electricity facilities on joint poles at 47 locations in order to provide clearance for cable being installed by Television Signal Corp.

Transferred Department of Electricity overhead lines to new poles at 88 locations due to work program of the Pacific Gas and Electric and Pacific Telephone companies.

ELECTRICAL DIVISION

SUMMARY OF TRAFFIC SIGNAL MAINTENANCE FOR THE FISCAL YEAR 1968-1969

The Traffic Signal Maintenance Division responded to a total of 3,396 complaints, requiring immediate attention. These complaints were received from various Governmental Agencies, both the State and Municipal, private citizens and personnel of the Department of Electricity.

In addition, a planned preventive maintenance program was carried out as the work load permitted.

As of June 30, 1969, 765 signalized intersections were being maintained.

Associated Traffic Control equipment was maintained as follows:

Walk-Wait Signals	1,249
No Left Turn Signs	26
Vehicle Pressure Detectors	679
Pedestrian Pushbuttons	523
Master Controllers	19
Cascade Stations	10
Illuminated Freeway Detour Signs	2
Flashing Beacons	7

Nine (9) new intersections were added during the year, as follows:

Army & Potrero, 1 additional Signal Head	9-24-68
Army & Bayshore, 1 additional Signal Head	9-24-68
Sloat Blvd., and 34th Avenue	12- 9-68
Folsom & 17th St.	12-10-68
Portola & Twin Peaks	2-27-69
Lincoln Way & 6th Ave.	3-11-69
Harrison & 13th Streets	3-11-69
California & Webster	3-13-69
California & Leavenworth	4-22-69

Complaints by the Month

1968

July	290
August	289
September	297
October	319
November	271
December	289

1969

January	324
February	239
March	276
April	304
May	275
June	223

ELECTRICAL DIVISION

There were 182 complaints covering damages to Traffic Signals.

Field Operations

Checked Operations	503
Walk-Waits Serviced	19
Controllers Serviced	41
Controllers Changed	606
Intersections Serviced	88
Intersections Mass Relamped	359
Master & Cascade A.M. Offsets Checked	670
Master & Cascade P.M. Offsets Checked	429
Dial Units Changed	133
Coordination Units Changed	18
Relays Changed	321
Pedestrian Timers Changed	37
Detector Frames Repaired	5
Flashers Changed	15
Signals put out of order by vandalism	3
Cabinet locks adjusted or changed	11
Manual Cords Replaced	8
Pedestrian Pushbuttons Changed	38
Marbelite Pole, 10 ft. Replaced	20
Steel Pole, 10 ft. Replaced	33
Signal Heads Replaced	120
Signal Heads Realigned	362
Signal Lens & Reflectors Replaced	86
Visors Replaced	118
Visors Repaired	141
Walk-Waits Realigned	47
Walk-Waits Repaired	36
Controller and/or Meter Cabinets Replaced	19

ELECTRICAL DIVISION

Repaired Conduit and Wiring	81
Checked Timing	50
Changed Timing and Placed Timing Cards	108
Neon Transformers Replaced	12
Wait Tubes Replaced	90
Walk Tubes Replaced	73
Don't Walk Tubes Replaced	15

Repaired and Serviced in the Shop

Controllers	527
Dial Units	584
Coordination Units	18
Pedestrian Timers	51
Relays	1,021
Flashers	46
Timers	19
Signal Heads	278
Detector Amplifiers	3
Made up Controller and/or Base Cabinets	5

A total of 15,851 Sixty-Seven Watt Lamps were used.

Conducted a bi-weekly test of Freeway Detour Signs controlled from the Central Fire Alarm Station.

Conducted weekly tests of ten (10) Cable Car Pre-empt Intersections, one (1) Cable Car Crossing, and one (1) Turn Table location.

Conducted a monthly test of the Fire Alarm Boxes and Traffic Signal Controls in the Broadway Tunnel.

Reset Time Clocks and Program Devices back one hour in October, and ahead one hour in April to conform to Daylight Saving Time in California.

Completed Work Orders and Service Orders in the amount of \$8,745.45, for improvements to signals, as requested by the Traffic Engineers, Department of Public Works.

MECHANICAL DIVISION
MANUFACTURE, MAINTENANCE &
REPAIR

Under the general administrative direction of the General Manager, the Machine Shop and Parking Meter Superintendent directs and supervises all maintenance and repair to all mechanical equipment under the jurisdiction of the Department of Electricity.

This equipment includes 2,038 Fire Alarm Boxes, 469 Police Patrol Boxes, all Instruments, Recorders, etc., at the Central Fire Alarm Station, all mechanical equipment at the Central Radio Station, Hall of Justice Communication's Room, 765 Traffic Signal Controlled Intersections, 13,236 Parking Meters and 53 Warning Sirens.

Work is accomplished by the personnel of the Mechanical Division:

- 1 - Machine Shop and Parking Meter
Superintendent
- 1 - Instrument Maker Foreman
- 6 - Instrument Makers
- 5 - Maintenance Machinists
- 1 - Parking Meter Serviceman Foreman
- 15 - Parking Meter Servicemen
- 4 - Painters
- 1 - General Laborer Foreman
- 1 - Laborer
- 1 - Janitor
- 1 - Automotive Serviceman

The painting and appearance of this equipment is the obligation of this Division and the painting program is continued to the fullest extent with the available personnel. We requested one working Painter Foreman in the 1967-1968, 1968-1969, and 1969-1970 Budgets; the requests were denied, and as a result we cannot paint signals, fire alarm boxes, police call boxes, sirens, and parking meters as often as they should be. The result is an increase in the backlog of work, costly deterioration and corrosion.

MECHANICAL DIVISION

Fifty-one (51) pieces of gas engine driven equipment - 45 mobile, 6 stationary, are kept in repair by the Purchasing Shops, but are under the control of the Machine Shop and Parking Meter Superintendent. The servicing of this equipment is done by 1 - Automotive Serviceman at 901 Rankin St.

The maintenance of three Departmental Buildings, Plant, 901 Rankin St., Central Fire Alarm Station, 1003 Turk Street, and Central Radio Station, Twin Peaks, is directed by the Machine Shop and Parking Meter Superintendent, though the majority of the work is accomplished by the Department of Public Works or through contractual services. An additional janitor had been requested in each budget for the past four years; the requests have been denied each time and as a result we cannot have the cleanliness and sanitation that is necessary. We did not request a janitor in the 1969-1970 budget, hoping to get other employments we deemed more essential for public service at this time.

The Mechanical Division works in close harmony with the Plant, Electrical, Traffic, and Radio Divisions of the Department of Electricity and with other Departments of the City to better serve the public.

Manufacturing

Various three-fold non-interfering Fire Alarm Boxes were made to replace obsolete Fire Alarm Boxes in the High Value Districts and new underground Districts, and old-type Fire Alarm Boxes were rebuilt to modern standards. Replacement parts for Fire Alarm Boxes, Police Patrol Boxes, Registers, Instruments, Parking Meters, were manufactured in the Machine Shop as needed.

Several new Parking Meter installations were made at several locations with more installations projected for the future. There are 13 off-street parking lots with a total of 371 Parking Meters. We requested a Parking Meter Serviceman and a Machinist in the 1967-1968 budget, and two Parking Meter Servicemen and a Machinist in the 1968-1969 budget and the 1969-1970 budget, and the requests were denied. This severely hampers the preventive and regular maintenance. The work load is too great for the number of employees we now have.

Miscellaneous tool and die and experimental projects, and Parking Meter tests were undertaken and completed. Special mechanical fixtures and apparatus were designed and manufactured for the various divisions of this Department to produce functional improvement.

MECHANICAL DIVISION

Maintenance and Repair

We performed little preventive maintenance due to the shortage of personnel; however, the necessary and vital repairs were performed to the mechanical equipment pertaining to the Department of Electricity.

Preventive maintenance to the Parking Meters is necessarily being neglected by our former standards of repair. We now have more installations than ever, however, with the same number of employments. Parking Meter revenue has decreased steadily due to the lack of enforcement, vandalism (we have been losing approximately 35 meters a month) construction, and maintenance due to a shortage of personnel. We hope that in future budgets consideration will be given to the above factors and some remedial action taken when necessary employments are requested.

Painting

Fire Alarm Boxes, Police Patrol Boxes, Traffic Signals and Controllers, Air Raid Sirens, Parking Meters, and other miscellaneous equipment were prepared and painted in the Shop and Field. Our cycle schedule of repainting is farther behind - we are now on a four to five year cycle instead of the two year cycle recommended for some of the above equipment.

Other Duties

Data was compiled for the Annual Budget of this Division by the Machine Shop and Parking Meter Superintendent, necessary specifications for machinery and automotive equipment were written and requisitions for equipment and supplies were made. Reports and correspondence related to the Mechanical Division were processed.

Records on all mechanical equipment and all parking meter field and shop services were kept.

A close liaison between this Division, the Parking Authority, the Police Department, Department of Public Works, and the Department of Finance and Records will be maintained to perform a better and more efficient Parking Meter Service for all concerned.

* * * * *

PERCENT OF PERSONNEL ALLOCATED - VARIOUS DIVISIONS

No.	Class	Title	Fire	Police	Traffic	Radio	Parking Meters	Air & C.D.	Misc.
1	7123	Machine Shop & Parking Meter Supt.	25	12	16	5	34	1	7
1	7234	Instrument Maker Foreman	35	10	10	8	25	1	11
6	7331	Instrument Makers	47	12	20	7	2	1	11
5	7343	Maint. Machinists					97		3
1	7215	Gen. Laborer Foreman					100		
1	7514	Gen. Laborer					100		
1	7243	Parking Meter Ser- viceman Foreman					100		
15	7444	Parking Meter Servicemen					100		
4	7346	Painters	2-70	1-25	2-100	1-1	1-20	1-5	1-9
1	7410	Automotive Serviceman	30	15	25	10	15		5
1	2714	Janitor	40	10	30	10			10
1	B512	General Clerk Typist	5	4		1	88		2

Temporary personnel were hired for vacation relief and special projects, as follows:

- 1 - 7243 Parking Meter Serviceman
Foreman 10 days
- 1 - 7331 Instrument Maker 40 "
- 2 - 7343 Machinists 198 1/2 "

MECHANICAL DIVISION
SUMMARY OF ACTIVITIES
FISCAL YEAR 1968-69

	<u>Total Number</u>
Manufactured Fire Alarm Boxes, parts and related equipment	13,776
Repaired Fire Alarm Boxes, parts and related equipment	3,337
Manufactured Police Call Boxes, parts and related equipment	677
Repaired Police Telephones and related Communications equipment	291
Manufactured Traffic Signal Parts and Special Tools	520
Repaired Traffic Signals, parts and related equipment	262
Manufactured and repaired miscellaneous radio equipment items	266
Miscellaneous items manufactured and repaired for Plant and vehicular equipment	833
Manufactured jigs, fixtures, tools, stamping dies and patterns for Machine Shop production and maintenance work	36
Manufactured miscellaneous parking meter parts	17,947
Repaired parking meter cases, mechanisms, timers, and miscellaneous parts	20,951

All Registers serviced weekly; all Tappers, Jokers and Repeaters serviced monthly at the Central Fire Alarm Station, 1003 Turk Street.

PAINTING - FIELD AND SHOP

The following items have been prepared, primed and finish coated:

<u>FIRE ALARM SYSTEM</u>	<u>TOTAL NUMBER</u>
Fire Alarm Boxes - Field and Shop	950
Fire Alarm Box Posts, Bases, Inner Shells, Sockets, Movement Housings, etc.-Field and Shop	925
 <u>POLICE COMMUNICATION</u>	
Police Call Boxes-Field and Shop	263
Miscellaneous items - Shop	33

MECHANICAL DIVISION

TRAFFIC SIGNALS

TOTAL NUMBER

Vehicular Signals - Field	1,176
Vehicular Signals - Shop	595
Signal Controllers - Field	295
Signal Controllers, Doors, Posts, Bases, etc.-Shop	1,150
Walk-Wait Pedestrian Signals - Field	199
" " " " - Shop	245
Signal Posts, Poles, etc., - Field	281
Traffic Signal Visors - Shop	737

RADIO DIVISION

Miscellaneous Radio Equipment - Shop	81
--------------------------------------	----

PARKING METERS

Parking Meter Cases - Shop	263
----------------------------	-----

MISCELLANEOUS PAINTING AT PLANT, 901 RANKIN ST.,
CENTRAL FIRE ALARM, 1003 TURK STREET, AND CENTRAL
RADIO STATION, TWIN PEAKS

Cabinets, Siren Parts, Ladders (oiled-shellacked), Brackets, Radio Equipment, Parts, Aluminum Strips, Redwood Moulding, touch-up, etc.	195
--	-----

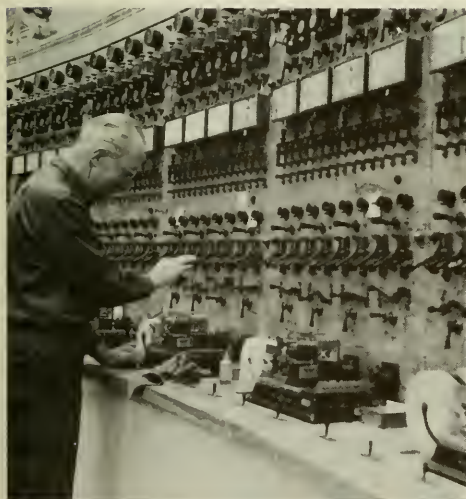
* * * * *



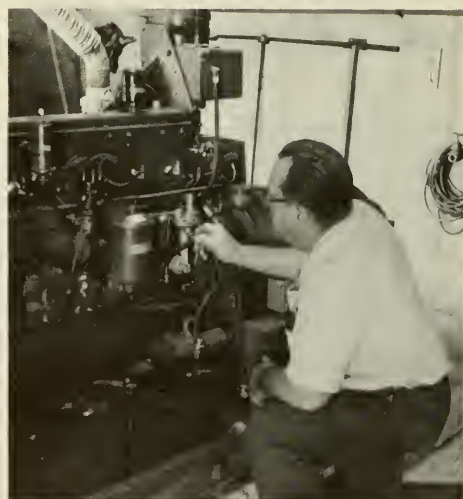
Testing and adjusting new
Fire Alarm Box



Repairing Traffic Counters



Servicing instruments at
Central Fire Alarm Station



Testing standby generator sets at
Central Radio Station



Ultrasonic Cleaning of
Parking Meter



Vandalized and damaged equipment



Repairing message conveyor unit
at Hall of Justice



Parking meter repairman preparing
for work



MECHANICAL DIVISION

SUMMARY OF ACTUAL ANNUAL REPAIRS TO PARKING METERS FISCAL YEAR 1968-69

Fire Alarm Box Glass Replaced.....	170
Jammed Intentionally.....	70,991
Cases Cleaned.....	194
Damaged Meters Removed.....	1,403
Exchange Heads.....	41
Exchange Mechanisms.....	5,638
Exchange Mechanisms for Cleaning.....	365
Exchange Timers.....	1,161
Hoods Removed.....	566
Lock Open Coin Doors.....	30
Loose Heads.....	222
Loose Mechanisms.....	44
Mechanical Adjustment Mechanisms.....	5,116
Mechanical Adjustment Cases.....	407
Meters Installed.....	760
Meters Removed from Service.....	229
O.K. Requested Inspections.....	882
Putty Glass.....	407
Replace Coin Glass.....	738
Replace Coin Lock.....	197
Replace Parts to Cases.....	1,605
Replace Parts to Mechanisms.....	163
Replace Signal Glass.....	2,482
Stuck Coins.....	6,145
Service Coin Door.....	31
Service Coin Lock.....	675
Stuck Indicators.....	1,032
Stuck Signals.....	926
Stuck Timers.....	986
Unwound Main Springs.....	1,669
Winding Hole Plugged.....	196
Parking Meter Heads Replaced.....	1,441
Checked for Traffic Fines Bureau.....	4,570
Machine Shop Repairs on Cases.....	2,323
Machine Shop Repairs on Mechanisms.....	3,790
Mechanisms Cleaned and Overhauled.....	6,103
Parking Meter Posts - Straightened.....	1,862
" " " - Removed.....	241
" " " - Relocated.....	101
" " " - Installed.....	923
" " " - Replaced.....	592
" " " - Reset.....	1,087
Parking Meter Complaints Received by Telephone	
Tax Collector's Office.....	6,503
Police Department.....	1,725
Total.....	<u>136,732</u>

MECHANICAL DIVISION

INVENTORY OF PARKING METERS

AS OF JUNE 30, 1969

<u>District</u>	<u>Number</u>	<u>Number in Off-Street Parking Lots</u>
A	871	61
B	915	83
C	1,071	
D	885	
E	813	
F	704	
G	855	
H	1,060	
I	956	
J	889	20
K	732	72
L	710	
M	740	
N	886	72
O	<u>778</u>	<u>63</u>
Total	<u>12,865</u>	<u>371</u>

12,865
371
Grand Total... 13,236

MECHANICAL DIVISION

The following shows material costs incurred through vandalism and traffic damages:

Traffic Damages to Parking Meters	\$14,144.42
Vandalism	<u>6,322.38</u>
	<u>\$20,466.80</u>

* * * * *

* * * *

FIRE ALARM OFFICE

The Fire Alarm Office at 1003 Turk Street includes receipt of alarms and dispatching fire apparatus. It is responsible for the operation of the entire fire alarm telegraph system of San Francisco. Fire Alarm personnel also receive trouble complaints and dispatch repairmen in connection with emergency repairs to traffic signals, police and fire communication equipment, test defective circuits, and operate the Civil Defense air raid warning system.

Personnel assigned to the Fire Alarm Office consist of the following:

- 1 - Chief Fire Alarm Dispatcher
- 9 - Fire Alarm Dispatchers
- 4 - Senior Telephone Operators

The following summarizes the activities of the Central Fire Alarm Station for the year ending June 30, 1969:

Fire Alarms of Fire Received and Transmitted	18,904	
Second " " " " " "	116	
Third " " " " " "	43	
Fourth " " " " " "	8	
Fifth " " " " " "	1	
Stills	11,190	
Directs	898	
Special Calls	<u>168</u>	31,328

Secondary Signals transmitted covering Alarms of Fire and routine operational business of the Fire Department.

148,881

180,209

Total Fire Alarm Boxes in service: 2038

Total Police Boxes in service: 469

The following summarizes complaints received from the Police Department, other Municipal Agencies and private citizens concerning equipment listed below:

Fire Alarm Wire Trouble	273
Sirens	13
Police	213
Radio	18
Traffic Signals	3395
Teletype	5
Miscellaneous	<u>395</u>
	<u><u>4312</u></u>

ADMINISTRATION AND ACCOUNTING

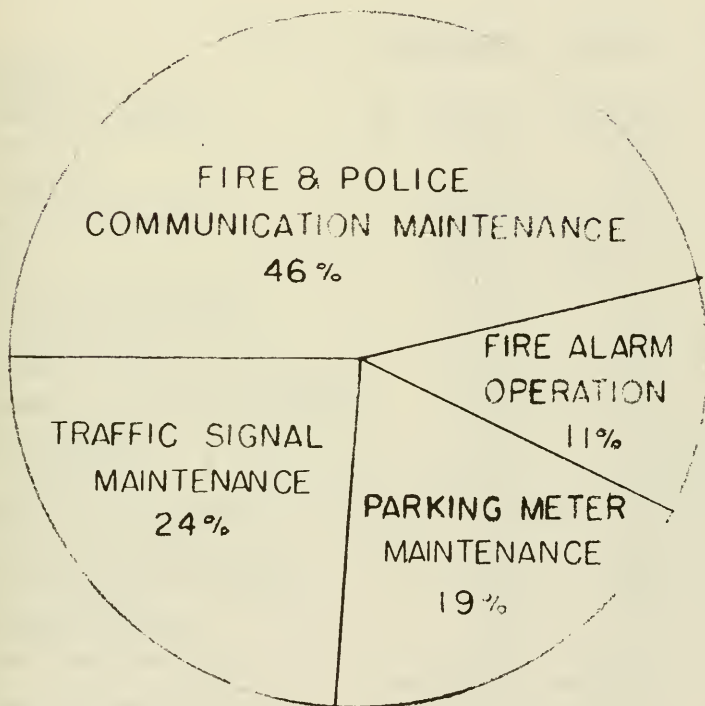
The Administration and Accounting Office is assigned a heavy responsibility for budgetary control of labor, material, service and equipment funds which must satisfy legal, accounting, and practical requirements. The primary goal of this office is to provide information to management through well controlled cogent reports.

Fiscal control in the divisional level is maintained through periodic operating and interdepartmental job cost statements. Improved collection and control of outstanding accounts receivable is a major concern. Minimum standards of completeness and continuity on the flow of all other formal documents, e.g., timerolls, requisitions, job estimates, vouchers etc., are constant objectives.

Functional allocation of the administrative staff is as follows:

	<u>Fire & Police Communication Maintenance</u>	<u>Traffic Signal Maint.</u>	<u>Parking Meter Maint.</u>	<u>Fire Alarm Operation</u>
General Manager	55%	20%	15%	10%
Senior Accountant	55%	20%	15%	10%
Accountant	55%	20%	15%	10%
Principal Clerk-Steno.	60%	20%	15%	5%
Senior Clerk-Steno.	80%	20%		
Clerk Stenographer	100%			
Clerk-Typist	10%		90%	
Account Clerk	65%	20%	15%	
Storekeeper	90%		10%	

DEPARTMENT OF ELECTRICITY MAINTENANCE & OPERATION 1968-1969



NOTE (1) MAINTENANCE INCLUDE ALL DAMAGES BY VEHICLES AND VANDALISM.

NOTE (2) FIRE AND POLICE MAINTENANCE INCLUDE UNDERGROUND AND OVERHEAD CONSTRUCTION, TELETYPE AND TELEPHONE SYSTEM, SWITCHBOARD AND RELATED EQUIPMENT AT THE HALL OF JUSTICE AND ALL FIRE HOUSE STATIONS.

NOTE (3) ADMINISTRATIVE AND OVERHEAD COSTS ARE ASSIGNED TO THE ABOVE FUNCTIONS ON A PRO-RATA BASIS.

APPROPRIATION AND JOB COST STATEMENT

YEAR ENDING JUNE 30, 1969

<u>Appropriation</u>	<u>Allowance</u>	<u>Charges</u>	<u>Balance</u>
Permanent Salaries	\$ 472,133	465,833	6,300
Overtime	4,890	4,890	
Holiday Pay	6,814	6,538	276
Temporary Salaries	12,000	11,901	99
Wages	905,372	901,053	4,319
Contractual Services	3,001	2,827	174
Materials and Supplies	103,297	101,540	1,757
Equipment	1,674	1,402	272
Equipment - Overhead Reserve	19,548	18,332	1,216
Fixed Charges	120	120	
Auto Repair	9,100	9,100	
Reproduction Services	420	389	31
Office Equipment Repair	210	181	29
Telephone and Telegraph	7,710	7,590	120
Scavenger Service	836	836	
Light, Heat and Power	11,500	11,211	289
Total Operating Budget	<u>\$1,558,625</u>	<u>1,543,743</u>	<u>14,882</u>

Job Cost

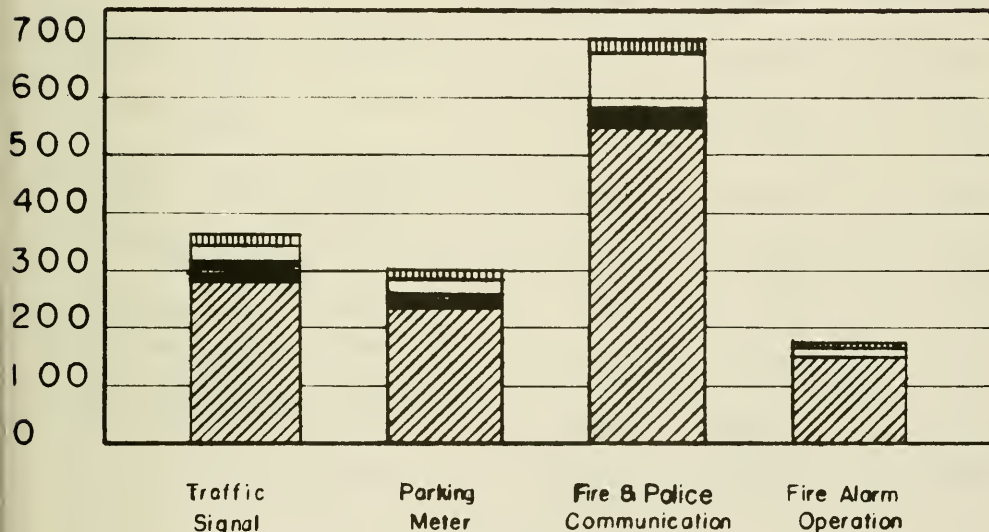
Interdepartmental Work Orders	284,014	161,642	122,372
Private Contractor Job Orders	14,036	8,570	5,466
Total	<u>\$1,856,675</u>	<u>1,713,955</u>	<u>142,720</u>

DEPARTMENT OF ELECTRICITY

COST OF MAINTENANCE AND OPERATION

\$ Thousands

1968-1969



Direct Labor



Direct Materials



Indirect Labor



Indirect Supplies & Services

1. Introduction 2. Methodology 3. Results 4. Discussion 5. Conclusion



Category 1	15
Category 2	45
Category 3	30
Category 4	35

ESTIMATED AND ACTUAL REVENUES

1968-1969

	<u>Estimated Revenue</u>	<u>Cash Received</u>	<u>Accounts Receivable</u>
(A) Damage Claims - Traffic Signal	\$ 28,000	20,663	2,545
(B) Damage Claims - Parking Meter	1,000	2,356	273
(B) Damage Claims - Police & Fire Alarm facilities	6,000	13,140	879
(C) Housemoving Electrical Inspection	400	119	24
(D) Loudspeaker on Vehicles	126	144	
(E) Police Terminal Alarm Panel	4,653	4,670	
(F) Off Premise Fire Alarm Locals	<u>2,856</u>	<u>2,915</u>	<u> </u>
Total Revenues	\$ <u>43,035</u>	<u>44,007</u>	<u>3,721</u>

COMMENTS

- (A) Recovery of damages is deposited to Road Fund.
- (B) Recovery of damages is deposited to General Fund.
- (C) Actual cost is \$11.79 (effective 6-1-69) for each inspection of the overhead line wires.
- (D) Actual cost is \$3.50 for each inspection of the sound amplifier and its audio quality.
- (E) Increase in rate from \$2.75 per connection per month to \$3.00 is recommended. Actual cost now exceeds revenue. Amendment to Municipal Code is required.
- (F) Increase in rate from \$2.25 per connection per month to \$2.75 is recommended. Actual cost now exceeds revenue. Amendment to Municipal Code is required.

DEPARTMENTAL COMMITTEES

SAFETY COMMITTEE

The Department of Electricity Safety Committee, composed of eight members, convened each month, and minutes were written on the business discussed at the meetings.

Industrial Accidents:

Seven (7) were reviewed, one (1) was ruled as Non-Preventable - six (6) being found Preventable.

Defensive Driving:

Twenty-four (24) personnel of the Department of Electricity attended and completed the course.

Safety Lectures:

Over twenty-five (25) personnel attended the Safety Lectures given by Mr. Jake Gold at the Palace of Legion of Honor May 5th and 6th.

Congress of Exhibits, Jack Tar Hotel, May 7th

The Secretary of the Safety Committee, the Secretary of the Accident Review Committee, and a representative of the Traffic Division, attended the luncheon and sessions the afternoon of May 7th.

Bulletin Board:

The Safety Bulletin Board was maintained up-to-date. Various salient posters were posted and for variety changed periodically.

At the close of business June 30, 1969, only four (4) recommendations made by the Safety Committee were pending.

The General Manager, each member of the Safety Committee, and each Division Head, have tried to the utmost to impress safety in the minds of the personnel of the Department of Electricity, and are very appreciative of the assistance afforded by the San Francisco Chapter of the National Safety Council.

VEHICLE ACCIDENT REVIEW COMMITTEE

The Department of Electricity has a Motor Vehicle Accident Review Committee which has been active since February, 1965. The Committee has three members appointed by the General Manager.

DEPARTMENTAL COMMITTEES

The purpose of the Motor Vehicle Accident Review Committee is the prevention of motor vehicle accidents by promoting the concept of Defensive Driving. The committee examines the details of every motor vehicle accident involving a vehicle operated by an employee in the course of his employment. After a careful review of all circumstances of the accident, the committee determines whether the accident was "Preventable" or "Unpreventable".

The committee investigates the following:

- 1) Driver's report of the accident.
- 2) Police Vehicle Accident Report.
- 3) Insurance reports, if any.
- 4) Facts based on an investigation by City representatives, if any.
- 5) Statements of witnesses, if any.
- 6) Diagrams, photographs, and any other available evidence.

At the meeting, each accident is thoroughly discussed, and a decision is reached whether the accident is "Preventable" or "Unpreventable". The employee is then notified in writing and if the accident was judged "Preventable", the employee has 15 calendar days to appeal the decision of the committee by writing to the General Manager.

Twenty-one (21) accidents were reviewed and seventeen (17) were declared "Preventable", four (4) "Unpreventable". One vehicle was "totaled" in an unpreventable accident. Two accidents involved minor personal injuries. The rest of the accidents resulted in minor damage to the vehicles. The Department of Electricity employees drove forty-one vehicles approximately 291,350 miles during the Fiscal Year 1968-1969.

DEPARTMENTAL COMMITTEES

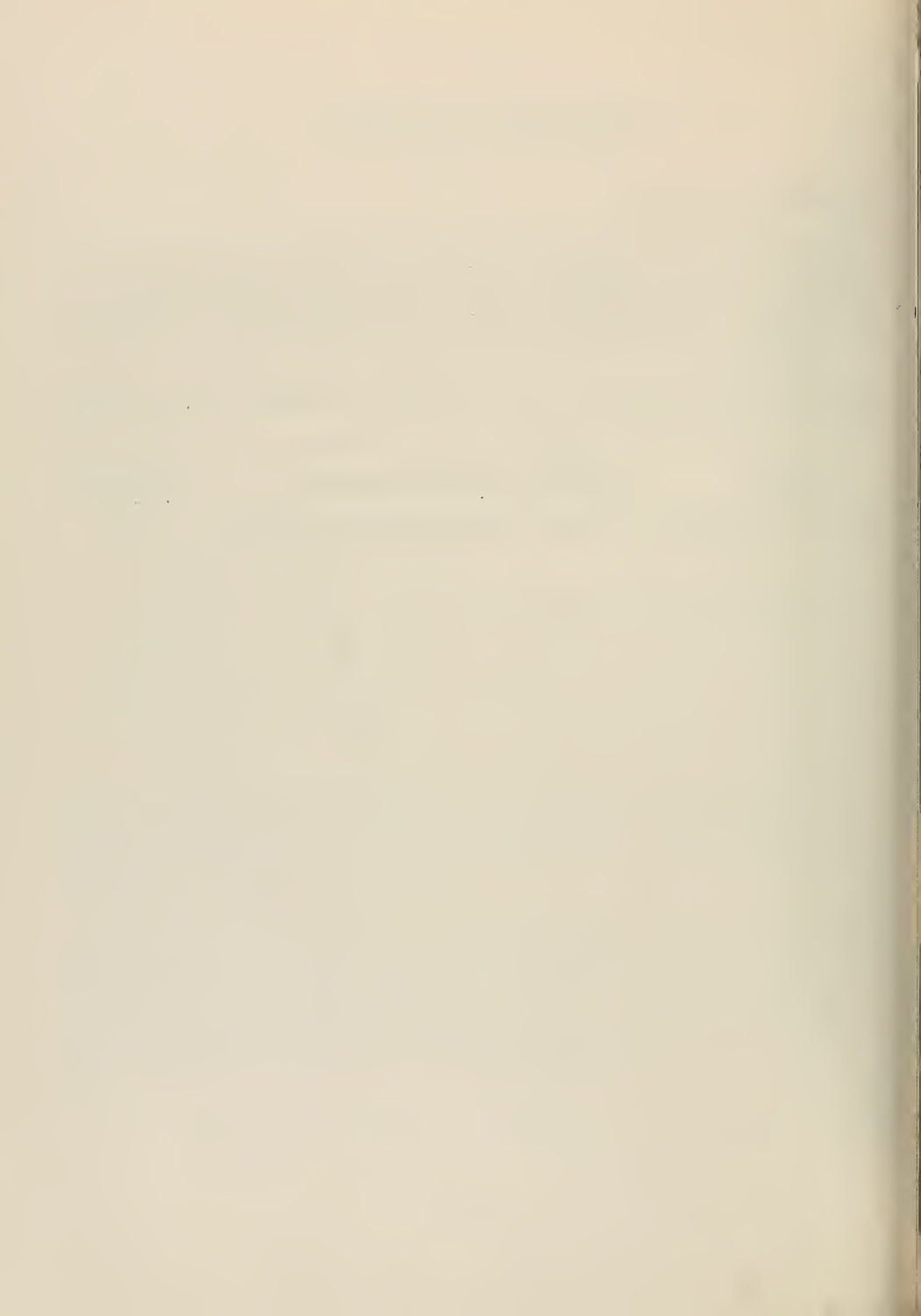
RETIREMENT COMMITTEE

Our Retirement Committee is employee oriented and consists of representatives of the various Divisions and classifications working in our Department. There have been selected from the group a permanent treasurer and a permanent secretary with the chairmanship rotating to the Division within which the retiree is assigned.

During the year the Retirement Committee arranged for ceremonies honoring one retiree:

<u>Name</u>	<u>Date Retired</u>	<u>Classification</u>	<u>Years of Service</u>
James J. Farrell	4-1-69	Electrician Foreman	19

* * * *



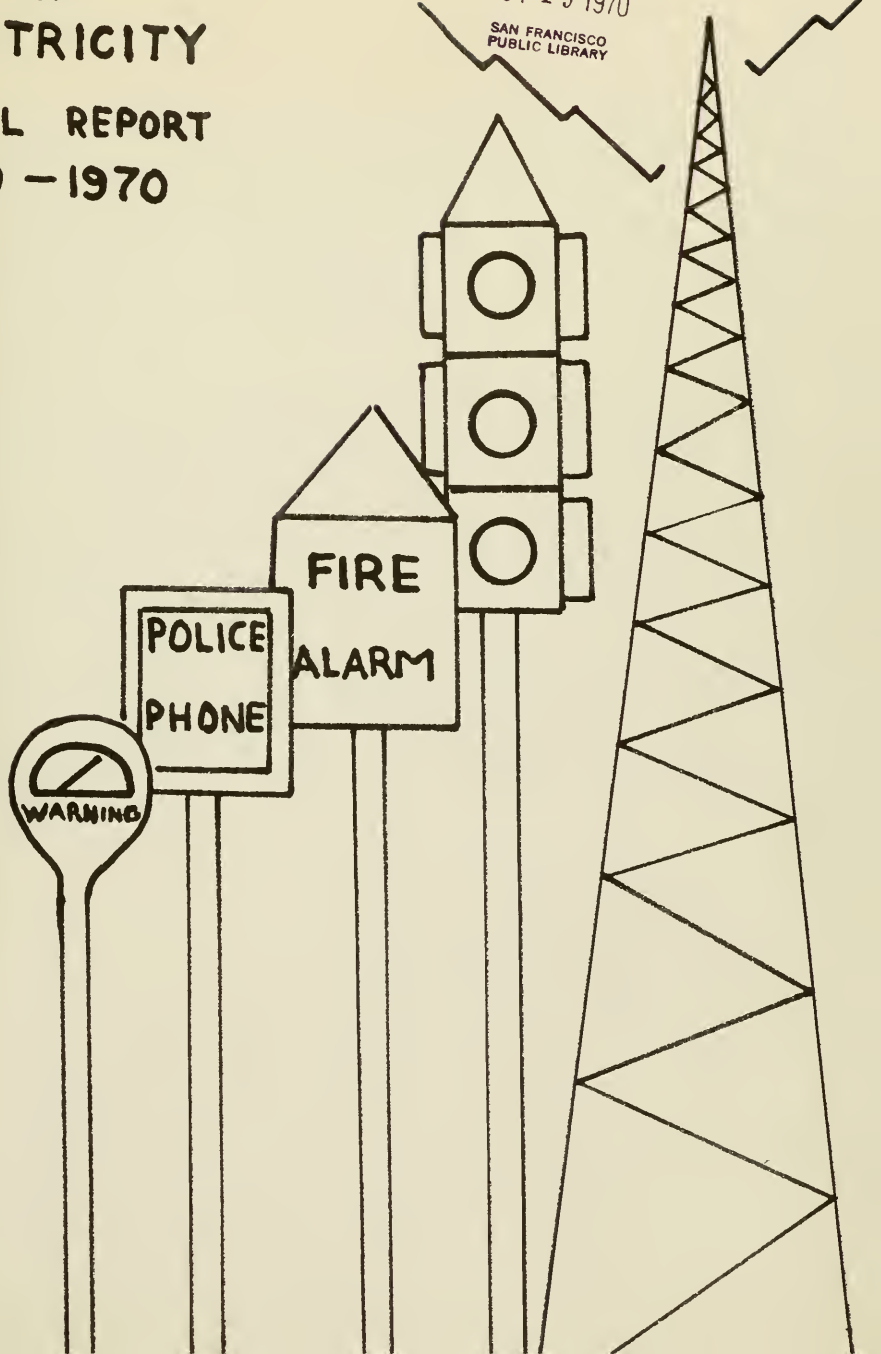
San Francisco

**DEPARTMENT
OF
ELECTRICITY
ANNUAL REPORT
1969 - 1970**

DOCUMENTS

OCT 19 1970

SAN FRANCISCO
PUBLIC LIBRARY



September 11, 1970

Mr. Thomas J. Mellon
Chief Administrative Officer
City and County of San Francisco
289, City Hall
San Francisco, California 94102

Dear Mr. Mellon:

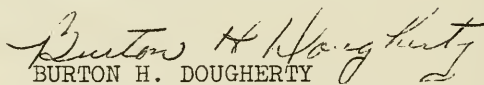
I am submitting the Annual Report of the Department of Electricity for the Fiscal Year 1969-1970 in compliance with the provisions of Section 20 of the Charter of the City and County of San Francisco.

As was the case during the previous fiscal year, there have continued to be further expansions in all areas of our responsibility with a resulting increase in work for our employees.

I wish to thank the dedicated employees of our Department for making it possible to continue to maintain a uniformly high degree of service for all City Departments.

I appreciate and thank you and your staff for the understanding and cooperation extended this Department in the past year.

Respectfully submitted,


BURTON H. DOUGHERTY
General Manager
Department of Electricity

ANNUAL REPORT
DEPARTMENT OF ELECTRICITY
CITY AND COUNTY OF SAN FRANCISCO
FISCAL YEAR 1969-1970

HON. JOSEPH L. ALIOTO
MAYOR

THOMAS J. MELLON
CHIEF ADMINISTRATIVE OFFICER

BURTON H. DOUGHERTY
GENERAL MANAGER

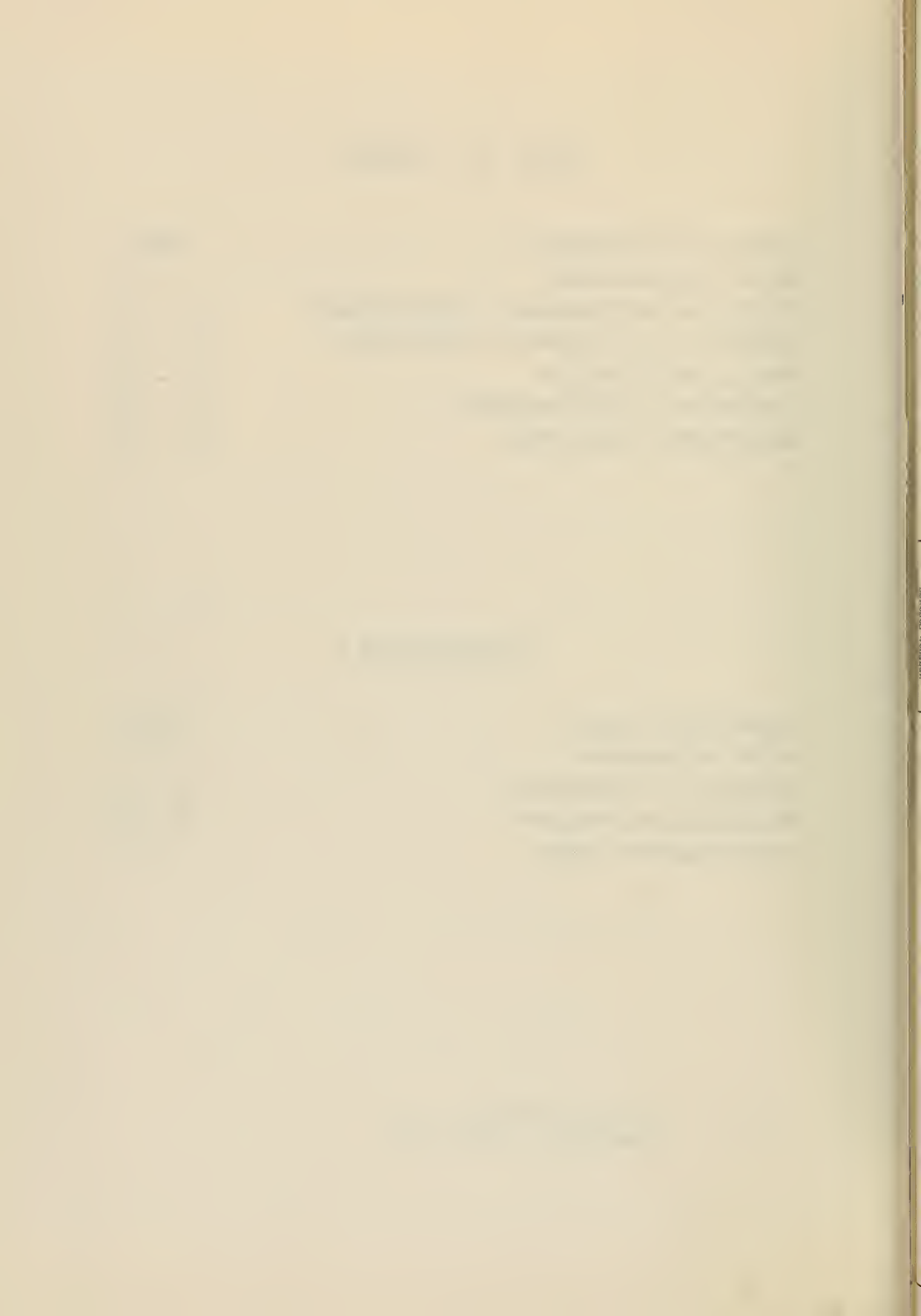
TABLE OF CONTENTS

LETTER OF TRANSMITTAL	FRONT
RADIO COMMUNICATION	1 - 14
ELECTRICAL MAINTENANCE & CONSTRUCTION	15 - 30
MECHANICAL MAINTENANCE & MANUFACTURE	31 - 41
FIRE ALARM OPERATION	42 - 43
ACCOUNTING (ADMINISTRATION)	44 - 46
DEPARTMENTAL COMMITTEES	48 - 50

ILLUSTRATIONS

ORGANIZATION CHART	FRONT
RADIO MAINTENANCE	11
ELECTRICAL MAINTENANCE	18 - 19
MECHANICAL MAINTENANCE	37 - 38
COST BREAKDOWN CHART	47

Cover by - Peggy Petersen
Sausalito, California



RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1969-70

Responsibility: Design, provide, install and maintain communication systems and associated facilities for various departments, divisions and services of the City and County of San Francisco.

The following general services were performed for the Police, Fire, Public Works, Electricity, Health, Coroner, Municipal Railway and Water Departments, including the Disaster Corps, Mayor's Office and Board of Supervisors, excepting, that normally there is no installation work for the Board of Supervisors, Municipal Railway, and Water Department:

Maintenance and repair services at the Radio Shop, 901 Rankin St.

Maintenance and repair services at various outlying locations.

Federal Communications Commission frequency, deviation and power measurements.

Installation of equipment in new or replacement vehicles.

Removal of equipment from obsolete vehicles.

Respond to emergency service calls during off-duty hours.

Perform preventive maintenance and periodical testing of Disaster Corps communications equipment and associated facilities.

RADIO DIVISION

POLICE DEPARTMENT

New 460-465 MHz Police Instantaneous Communication System

The specifications for the system were reviewed, edited and modified where necessary and forwarded to the Purchasing Department. The contract was awarded to an acceptable contractor and delivery of the equipment for the first phase of the system will be in the next fiscal year.

Specifications for Police Instantaneous Communication two-way portable radios were started. The portable radios will provide personalized instantaneous communications from headquarters to each police officer in the field.

Various radio frequency propagation surveys have been made to determine the most advantageous locations for the systems many base (mobile relay) radio stations and satellite receivers. Studies were made from Central Radio Station, the city-wide radio station location, to evaluate the difference in radio propagation between a standard omni-directional antenna and a special 5° down-tilt antenna. The down-tilt antenna would be used to direct a maximum of radio frequency signal into the City of San Francisco and to minimize interference with co-channel users in the Bay Area. Data from these surveys has been compiled for analysis and evaluation.

Meetings have been held with the City and County of San Francisco Right-of-Way Agent in regard to securing a needed Police Instantaneous Communication base (mobile relay) Radio Station site, in a privately owned building.

Meetings have been held with Police Department representatives relative to the Police Instantaneous Communication System control console requirements at the Hall of Justice Communications Center.

Digital Communications

A Law Enforcement Assistance Act for the San Francisco Police Department to conduct an experimental communications project involving the integration of a digital overlay system with an existing voice communications channel. The project was awarded to the Sylvania Company of Mountain View, California. The Department of Electricity, Radio Division, assisted the

RADIO DIVISION

Sylvania Company with the equipment installation, a total of nineteen (19) police cars from the Southern, Mission, and Potrero Stations. The heart of the system, which includes a computer, television viewing screens and other electronics circuitry was integrated into the existing radio console at the Hall of Justice. The system is now in use and will be evaluated.

Portable Transceivers

Fourteen (14) new portable high band transceivers were purchased for the Police Department.

San Francisco has requested that the University of California Hospital Police release their frequency 155.55 MHz, which is presently shared with the San Francisco Police, and be relicensed on a state frequency. An agreement is now being prepared.

Command Operations Center Exercise (Used in Emergencies)

The Police Department held a two (2) day training exercise from the Command Operations Center at the Hall of Justice. Department of Electricity personnel participated.

FIRE DEPARTMENT

Specifications were prepared and portable citizen band radios and paging receivers were purchased for the Fire Department.

SHERIFF'S DEPARTMENT

A small radio system to operate on our present Local Government for the Sheriff's Department System has been purchased and is being installed.

CORONER'S OFFICE

A system design and estimate were prepared and submitted to the Coroner for a Local Government Radio System.

RADIO DIVISION

WATER DEPARTMENT

An Ultra High Frequency Paging System has been purchased and installed at the Central Radio Station.

HEALTH DEPARTMENT

Designed and submitted an estimate for a Security Communications System at Laguna Honda Home. Federal Communications Commission License is being obtained.

DISASTER CORPS

Matching Fund Applications were prepared for the Alert System (sirens) and radio communications maintenance.

Communications Annex to the San Francisco Disaster Plan was revised.

Periodical tests were performed for all "standby" alerting and communications equipment.

DEPARTMENT OF ELECTRICITY

System designs, estimates, specifications and requisitions were prepared for various departments.

Various meetings were attended and field trips taken as required.

San Francisco was represented at Frequency Advisory Committee Meetings (one each month) at various Northern California locations. San Francisco was host for the October Associated Public Safety Communication Officers meeting.

Forty (40) Base and Mobile Radio Station Licenses were renewed by the Federal Communications Commission.

The Federal Communications Commission temporarily authorized an existing Police frequency for digital transmission.

SPECIAL EVENTS

Assisted in planning and operating the United Nations 25th Anniversary Amature Radio Station from the City's Communications Van in front of the Opera House.

RADIO DIVISION

RADIO SHOP ACTIVITIES

- I Mobile Communications Units Serviced in Radio Shop
- 3077 - Repaired.
 - 169 - Installations.
 - 124 - Removals.
 - 514 - Miscellaneous Electronics.
 - 1745 - Federal Communications Commission Calibrations.
- II Special Non-Reoccurring Projects
- 503 - Various
- III Preventive Maintenance Services
- 587 - Various Locations.
- IV Departmental services (other than preventive maintenance)
at the following locations:
- Police Department
- 228 - Hall of Justice.
 - 63 - District Base Stations.
 - 76 - Central Radio Station.
 - 33 - Bernal Heights.
 - 17 - Pawn Shops - various.
 - 5 - Helicopter.
 - 2 - Communications Van.
- Fire Department
- 131 - Central Fire Alarm Station
 - 46 - Central Radio Station.
 - 60 - District Base Stations.
 - 82 - Secondary Stations.
 - 360 - Heavy Apparatus.
 - 14 - Boats.
 - 1 - Airport.
 - 5 - Fire Headquarters.
 - 4 - Fire College.
- Dept. of Electricity - Local Government
- 28 - Central Radio Station.
 - 7 - Central Fire Alarm Station.
 - 8 - 901 Rankin Street.
 - 9 - Bernal Heights.

RADIO DIVISION

Municipal Railway

- 22 - Central Radio Station.
- 8 - Headquarters (Presidio Ave.).
- 3 - Forest Hill.
- 1 - Twin Peaks Blockhouse.
- 45 - Car Barns, various.

Water Department

- 9 - Newcomb Street Yard.
- 17 - Bernal Heights Radio Station.
- 11 - Central Radio Station.
- 6 - Headquarters (Mason St.).
- 3 - Lake Merced Pump Station.
- 2 - Hall of Justice.

Dept. of Public Works

- 3 - Central Radio Station.
- 2 - Army Street Yard.

Supervisors

- 5 - City Hall

Harbor Police

- 6 - Hunter's Point.

Society for Prevention of Cruelty to Animals

- 1 - Central Radio Station.

Disaster Corps

- 1 - Communications Van.
- 1 - Central Radio Station/Emergency Operating Center.

Coroner

- 5 - Office and Autopsy Room.

RADIO DIVISION

WORK ORDERS - 1969-70

<u>Work Order #</u>	<u>Date</u>	<u>Dept.</u>	<u>Amount</u>	<u>Purpose</u>
8-8859	7-7-69	Coroner	\$ 842.00	Alteration of equipment in changing from Police radio frequencies to Local Government frequencies.
9-0246	7-7-69	Muni Rwy.	2,500.00	Repairs and maintenance of radio communications units and related equipment for period ending December 31, 1969.
9-0256	7-7-69	Water	2,000.00	Installations and maintenance, including all necessary materials and supplies for the San Francisco Water Department Radio System, during the period of July 1 through December 31, 1969.
9-0400	7-21-69	Sheriff	3,745.00	Equipment and installation of Sheriff's Local Government System.
9-0575	8-11-69	Fire	10,000.00	Furnish 34 two-way mobile and portable radio units as required.
9-0576	8-11-69	Police	137,608.00	Procure, prepare and install 36 portable radio units with accessories and two (2) Base Radio Stations and Satellite Relay Stations.
9-0577	8-11-69	Police	37,588.65	Provide and install new two-way radio equipment for thirty motorcycles; provide and install thirty-six crystals.
9-0578	8-11-69	Police	11,205.00	Furnish and prepare 12 portable radio units to be used in the Police Radio System
9-0614	8-18-69	Police	2,803.19	Labor and materials for modification and transfer of radio equipment in 20 motorcycles.

RADIO DIVISION

<u>Work Order #</u>	<u>Date</u>	<u>Dept.</u>	<u>Amount</u>	<u>Purpose</u>
9-0651	8-26-69	Police \$	3,004.18	For transfer and/or installation for two-way radio equipment for 36 Police vehicles.
9-0941	10-14-69	Muni Rwy.	5,000.00	Repairs and maintenance of radio communications units and related equipment for period ending December 31, 1969.
9-1057	11-3-69	D.P.W.	900.00	Furnish and install new mobile radio unit for Bureau of Sewer Repair.
9-1209	12-15-69	Water	2,000.00	Installations and maintenance, including all necessary materials and supplies for the San Francisco Water Dept. Radio System during period of January 1st through June 30, 1970.
9-1271	12-23-69	Muni Rwy.	10,000.00	Repairs and maintenance of radio communications and related equipment for period ending June 30, 1970.
9-1437	1-14-70	Police	220.00	Furnish and install public address communication equipment and brackets in the Police helicopter.
9-1611	2-24-70	Disaster Corps	1,155.51	Purchase and installation of a two-way radio.
9-1638	3-2-70	Fire	675.00	Radio equipment outfitting for new Fire vehicles.
9-1668	3-9-70	Police	496.74	Procurement and installation of a public address system for the Police helicopter.
9-1739	3-23-70	Police	1,598.46	Furnish and install communications system selectors and control units for Police helicopter.

RADIO DIVISION

<u>Work Order #</u>	<u>Date</u>	<u>Dept.</u>	<u>Amount</u>	<u>Purpose</u>
9-1881	3-31-70	S.F. Air- port	\$ 100.00	For emergency repair and maintenance of airport radio and electronic equipment.
9-2032	4-14-70	Health	1,000.00	Purchase and install two-way radio for Superintendent's car.
Spec. Job 119 (Rev)	4-14-70	S.F. Housing Authority	2,397.84	Labor and material to procure and install mobile transceivers and mobile public address systems.
9-2106	4-28-70	Muni Rwy.	10,000.00	To transfer 100 radios from motor coaches in dead storage to 80 trolley coaches and 20 service vehicles.
9-2107	4-28-70	Muni Rwy.	226.52	To test new frequency for inspectors radio system.
9-2187	5-14-70	Park & Rec.	508.16	Furnish and install three citizen band radio communication units in S.F. Zoological Gardens entrance facilities.
9-2221	5-26-70	D.P.W.	350.00	Installation of 26 garage door opener radio transmitters, antennas and hardware in connection with radio controls for overhead doors at various Fire Stations.
9-2250	6-1-70	Police	9,864.20	Supplement to W.O.#8-534 encumbered 8-12-68 to furnish and prepare for use 36 two-way portable radio units and 7 multi-battery chargers. This supplement is required to cover increased costs in materials and labor and to complete the support system for the portable radio units.

RADIO DIVISION

<u>Work Order #</u>	<u>Date</u>	<u>Dept.</u>	<u>Amount</u>	<u>Purpose</u>
9-2295	6-22-70	Coroner \$	447.00	Replacement of defective wiring, microphones, elimination of hum and general overhaul of autopsy recording system.

RADIO MAINTENANCE



Trouble shooting a problem Radio Transmitter



Radio Repair



Radio Installation



RADIO COMMUNICATIONS DIVISION

SUMMARY OF ACTIVITIES 1969-70

EMPLOYEE COMPLEMENT

NUMBER OF
EMPLOYEES

TITLE

CLASS

1	Radio Engineer	5246
2	Sr. Radio Technicians	7368
8	Radio Technicians	7367

PERCENTAGE OF LABOR ALLOCATED

<u>DEPARTMENT</u>	<u>%5246</u>	<u>%7368</u>	<u>%7367</u>	<u>Hours</u> <u>Overtime</u>
POLICE	62	66.15	45.70	82
FIRE	6	28.40	24.81	36½
DEPT.OF PUBLIC WORKS	4	2.19	3.00	-
ELECTRICITY	10	3.26	15.97	29
HEALTH	3	-	1.06	-
CORONER	1	-	.26	-
MUNICIPAL RAILWAY	5	-	4.18	-
WATER	3	-	3.73	-
DISASTER CORPS	4	-	.53	-
SUPERVISORS	1	-	.20	-
MAYOR	-	-	.49	-
MISCELLANEOUS	1	-	.07	-

Hours Overtime 147½

Days (Temporary
Employees) 498

Days (Vacation Relief)

Class 7368 17

Class 7367 105

RADIO DIVISION

MOBILE TWO-WAY RADIO UNITS SERVICED AND MAINTAINED
FISCAL YEAR 1969-'70

<u>Department</u>	<u>No. of Radio Units</u>	<u>Total No. of Dept. Units</u>
<u>Police</u>		
Cars and Trucks	277	
Solo Motorcycles	91	
Servicar Motorcycles	108	
Helicopter	1	
Command Car	1	
Portables	53	531
<u>Fire</u>		
Cars and Apparatus	169	
Fire Boats	2	
Command Car	1	
Portables (UHF)	54	
Portables (Citizen).	3	229
<u>Water</u>		
Cars and Trucks	98	
Portables	2	100
<u>Dept. of Public Works</u>		
Cars and Trucks	51	
Boat	1	
Portables (Citizen)	4	56
<u>Dept. of Electricity</u>		
Cars and Trucks	30	30
<u>Municipal Railway</u>		
Cars and Trucks	47	
Coaches	240	287
<u>Health Dept.</u>		
Ambulances	14	
Station Wagon	1	
Car	1	
Portables	4	20
<u>Special Police</u>		
Cars	13	
Servicar Motorcycle	1	14
<u>*Society for Prevention of Cruelty to Animals</u>		
Cars and Trucks	8	8
<u>Disaster Corps</u>		
Cars	3	
Communications Van	1	
Portables	2	6

RADIO DIVISION

<u>Department</u>	<u>No. of Radio Units</u>	<u>Total No. of Dept. Units</u>
<u>Coroner</u>		
Cars and Wagons	5	5
<u>Harbor Police</u>		
Cars	2	
Servicar Motorcycles	2	4
<u>Sheriff</u>		
Cars	2	2
<u>Housing Police</u>		
Cars	3	3
<u>Chaplains</u>		
Cars	3	3
<u>Police Commission</u>		
Cars	3	3
<u>Fire Commission</u>		
Cars	3	3
<u>Chief Administrative Officer</u>		
Car	1	1
<u>Mayor's Office</u>		
Cars	2	2
<u>*Federal Bureau of Investigation</u>		
Cars	3	3
Total.....		<u>1,310</u>

*Federal Communications Commission calibration only.

ELECTRICAL DIVISION
SUMMARY OF WORK PERFORMED
FISCAL YEAR 1969-1970
=====

CONSTRUCTION, MAINTENANCE AND REPAIR OF:

Central Fire Alarm Station, includes standby generator, rectifiers, main batteries and all electrical fire alarm communication apparatus and circuitry.

Circuits from Central Fire Alarm Station to 2034 Fire Alarm Boxes located in the City Streets; testing of each box at 60 day intervals.

Auxiliary Fire Alarm Systems in 125 Public Schools - includes inspection and testing of each school with Central Fire Alarm Station on a monthly basis.

Police Department Emergency Telephone System, consisting of a switchboard and circuits to 469 Police Call Boxes on the City streets and 79 locals in the Hall of Justice and various Bureaus and Police Stations.

Police Teletype System which includes two teletype transmitters and control consoles located in the Hall of Justice with circuits to 22 printers located in the Hall of Justice and to various Bureaus and Police Stations in the City.

Bank Alarm System, Private Local Telephone Systems and Communication Alarm and Signal Systems in the Hall of Justice.

Traffic Signals and associated underground control cables at 783 intersections.

Air Raid Sirens at 53 locations and associated remote control equipment.

Overhead lines and underground cable system through the City's 49 square mile area.

Auxiliary Fire Alarm Systems: this Division approves, tests, and supervises the connection of Auxiliary Fire Alarm Systems to the Municipal Fire Alarm System by the Auxiliary Fire Alarm Companies legally authorized by franchise or permit to engage in auxiliary fire alarm business in San Francisco.

ELECTRICAL DIVISION

PERMANENT PERSONNEL

- 1 - 7131, Electrical Maintenance and Construction Superintendent
- 1 - 5238, Associate Electrical Engineer
- 1 - 5352, Electrical Draftsman
- 1 - 7273, Lineman General Foreman
- 1 - 7257, Lineman Foreman
- 13 - 7338, Linemen
- 3 - 7308, Cable Splicers
- 1 - 7276, Electrician General Foreman
- 2 - 7238, Electrician Foremen
- 14 - 7345, Electricians
- 4 - 7514, General Laborers

Days worked by temporary personnel in the Electrical Division during the fiscal year due to work orders, special projects, vacation relief, and retirements.

7257 Lineman Foreman	254 Days
7338 Lineman	706 Days
7308 Cable Splicer	254 Days
7345 Electrician	395 Days
7215 Laborer Foreman	254 Days
7514 Laborer	219 Days

FIRE ALARM SYSTEM

Maintained fire alarm equipment in the Central Fire Alarm Station and in 48 Fire Stations; also maintained the communication systems connecting these facilities.

Repaired or replaced in Fire Stations:

- 95 - Registers
- 35 - Bells
- 47 - Relays
- 52 - Automatic Light Switches
- 20 - Intercommunication Systems

Inspected and tested with the Central Fire Alarm Station 2034 Fire Alarm Boxes at least once every 60 days.

ELECTRICAL DIVISION

Inspected, serviced, and tested with the Central Fire Alarm Station the Auxiliary Fire Alarm System in 125 Public Schools at least once each month.

Responded to Schools on 45 occasions in regard to complaints or to assist school district personnel with trouble on the Local Fire Alarm or the Auxiliary Fire Alarm System.

Rewound 604 school boxes pulled for false alarms.

Replaced 28 old style Fire Alarm Boxes with modern 3_fold non-interfering type Fire Alarm Boxes.

Detail assignment responded to 15 cases of Parking Meter trouble, and 520 emergency traffic signal complaints.

Repaired 33 Fire Alarm Box standards.

Converted 13 Fire Alarm Box services from overhead wire to underground cable.

Repaired or replaced 36 Fire Alarm boxes damaged by vehicles.

Relocated 5 Fire Alarm boxes.

Removed 240 Fire Alarm Boxes to Shop for repairs, and subsequently reinstalled.

Maintained Fire Alarm System in the Broadway Tunnel for the Department of Public Works.

Cleared 267 cases of trouble on overhead Fire Alarm circuits.

Responded to complaints and made 23 repairs on outside Local Fire Alarm Systems.

Conducted weekly tests of Market Street crossing bells. Repaired bells at 15 locations.

Rebuilt underground cable pot heads at 24 Fire Alarm Boxes.

Replaced 380 feet of 1/2" conduit to Fire Alarm Boxes on wood poles.

Made repairs, alterations and improvements to overhead Fire Alarm System at 284 locations involving the installation of 98 crossarms and 35,450 feet of overhead line wire.

ELECTRICAL DIVISION



Cable Splicer installing underground terminal



The Line Crew installing underground cable



The Labor Crew trenches for installation of Fire Alarm Conduit



Linemen preparing to install crossarm



ELECTRICAL DIVISION



Adjusting transfer switch



Repairing Electronic Dispatch



Modifying Controller in field



Assembling Dial Unit motors



ELECTRICAL DIVISION

POLICE DEPARTMENT

Repaired and maintained Police Department's switchboard and related equipment at the Hall of Justice and 79 telephones located within the building, and 469 call boxes located on the City streets, in parks and public buildings, and military and private police agencies.

Serviced and maintained the Police Teletype System; answered 32 complaints.

Serviced and maintained the following signal systems at the Hall of Justice:

Coroner's Intercom	Local Telephone Systems
Bank Alarm System	1) Chief of Police
Auxiliary Fire Alarm	2) City Jail Visitors
System	3) County Jail Visitors

Repaired 60 cases of trouble on the above systems.

Relocated 4 Police Call Boxes.

Repaired or removed to the Shop for repair 61 Police Call Boxes.

Replaced 200 feet of 1/2" conduit and wiring to Police Call Boxes mounted on wood poles.

Cleared 133 cases of trouble on Police circuits.

Repaired 2 Police Boxes damaged by vehicles.

Converted 3 Police Boxes from overhead wire to underground cable.

Removed 3 Police Boxes from service and installed 3 new boxes.

CITY AND COUNTY RADIO SYSTEM

Tested and serviced once each week the two emergency generators and associated power plant equipment at the Central Radio Station, Christmas Tree Point, Twin Peaks.

ELECTRICAL DIVISION

Made quarterly inspection of both towers at the Central Radio Station for corrosion and required maintenance; also serviced photo-cell controls and relamped tower lights.

Installed 2 new antennas and coaxial cables on towers at Central Radio Station.

Installed antenna and cable on water tower at McLaren Park.

Made daily visual check of all tower lights and entered same in log per Federal Communications Commission requirements.

Maintained the landlines between the Central Radio Station and the control units located in the Hall of Justice, Central Fire Alarm Station, and various other City Departments which use the City and County Radio System in their daily operations.

DISASTER CORPS

Serviced, maintained, and conducted weekly tests of the City's 53 Air Raid Sirens and associated remote control circuits and equipment. Located and cleared, or reported to Pacific Telephone Company for clearance, 25 cases of trouble on Air Raid Sirens or control circuits. Maintained emergency power generators, batteries and associated electrical control equipment at the Civil Defense Control Center.

Disconnected Sirens on 48 occasions to permit Pacific Telephone and Telegraph Company to work on cable without setting off sirens.

Overhauled sirens at three locations.

Inspected all sirens for paint condition.

UNDERGROUND DISTRICT - PROGRAM

Department of Electricity facilities were converted from an overhead to an underground system in the following areas:

Arguello Boulevard - Geary to Fulton

17th and Clayton

(17th Street - Belvedere to Roosevelt)

(Clayton - Ashbury to Carmel)

ELECTRICAL DIVISION

Chenery Street - Elk to Diamond

Indiana Street - 372' south of 22nd St to 23d St

Grandview and Romain Streets
(Market to Douglas)

El Camino Del Mar and 32nd Avenue
(32nd Avenue - California to El Camino Del Mar)

16th Street - Potrero to Bryant

Francisco Street - Kearny to Montgomery

Marina District - Stage 2 Part I
Cervantes St - Beach to Avila
Avila - Cervantes to Marina Boulevard

Judah Street - 44th Avenue to Great Highway

2nd Street - Indiana to Third Street

Roosevelt Way - Upper Terrace to Alpine

Park Hill Avenue - Roosevelt to Buena Vista East

Prepared plans and estimates for converting Department of Electricity facilities from overhead to underground systems at the following locations in conjunction with Department of Public Works 1970-1971 underground district program:

Alamo Square - Stage 2
Alamo Square - Part 2

Bernal Heights - Stage 2

Romain Street - Market to Corbett

Pacific Heights Area - Stage 1

North Waterfront Area - Stage 2

Marina District - Part 2 - Stage 2

Pennsylvania-Mariposa-Illinois-Army - Stage 4

ELECTRICAL DIVISION

Monterey Boulevard - Ridgewood to Circular

Hunters Point Area - Stage 2

Prepared plans, estimates, and completed work under Department of Public Works work orders at the following locations:

Army Street Circle - Contract I

Arguello Blvd and Balboa St Intersection
(Traffic Signal Minitrol Interconnect)

Various Intersections - Contract 3
(Traffic Signal Minitrol Interconnect)

Hyde and Bay Streets
(Installation of conduit for cable car preempt)

Embarcadero Plaza
(Fire Alarm and Police Box Relocation)

REDEVELOPMENT AREAS

Performed work as required in the following locations--due to the project areas, and the scheduling of streets being converted from overhead to underground, work has been completed on a percentage basis:

Golden Gateway - 85%

Western Addition - A-2 - 15%

Completed areas in the Western Addition A-2 -

Broderick Street - O'Farrell to Turk
Steiner Street - Fulton to Golden Gate

Hunter's Point Redevelopment - 5%

ELECTRICAL DIVISION

BAY AREA RAPID TRANSIT DISTRICT

Performed work relocating Fire Alarm and Police Boxes and cables to facilitate construction at:

Montgomery Street Station
Powell Street Station
16th Street Station
24th Street Station
Glen Park Station

Prepared plans and estimates for relocating Department of Electricity cables and facilities at:

Van Ness Avenue Station
Powell Street Station Extension
Montgomery Street Station Extension

FREEWAYS

Converted Department of Electricity overhead lines to underground cables on 7th Street from Irwin to 16th Street.

AUXILIARY FIRE ALARM CONNECTIONS

Installed Master Fire Alarm Box and associated conduit and wiring, and supervised connection of Auxiliary Fire Alarm Systems as follows:

Shriner Hospital - 19th and Moraga
El Dorado School
St. Ignatius High School
Buena Vista School
Ulloa School Annex
Bank of America - Kearny and Pine

ELECTRICAL DIVISION

Relocated Fire Alarm and Police Call Boxes and associated conduit and wiring due to building or street construction as follows:

6th and Bryant Streets
Army Street Circle
12th and Market Streets

Repairs, alterations or improvements were made to our underground cable system at 244 locations requiring the installation of approximately 43,738 feet of cable and 3,025 feet of underground conduit.

Surveyed and checked Department of Electricity underground facilities and marked locations on the surface of the street in connection with numerous sewer, water, and street improvement projects.

Checked routing and overhead line clearances in connection with housemoving permits.

Relocated Department of Electricity facilities on joint poles at 16 locations in order to provide clearance for cable being installed by Television Signal Corp.

Transferred Department of Electricity overhead lines to new poles at 106 locations due to work program of the Pacific Gas and Electric and Pacific Telephone companies.

* * * *

ELECTRICAL DIVISION

SUMMARY OF TRAFFIC SIGNAL MAINTENANCE FOR THE FISCAL YEAR 1969-70

The Traffic Signal Maintenance Section responded to a total of 2,566 complaints, requiring immediate attention. These complaints were received from various Governmental Agencies, both the State and Municipal, private citizens and personnel of the Department of Electricity. This represents a reduction of approximately 25% over last year's total of 3,396, owing to our program of group replacement of traffic signal lamps.

In addition, a planned preventive maintenance program was carried out as the work load permitted.

As of June 30, 1970 783 signalized intersections were being maintained.

Associated Traffic Control equipment was maintained as follows:

Signal Heads	6,569
Walk-Wait Signals	1,024
No Left Turn Signs	26
Vehicle Pressure Detectors	679
Pedestrian Pushbuttons	523
Master Controllers	19
Cascade Stations	10
Illuminated Freeway Detour Signs	2
Flashing Beacons	7

Nineteen (19) new intersections were added during the year, as follows:

Turk and Arguello	July 22, 1969
Clayton and 17 th	Nov. 12, 1969
Clayton and Twin Peaks	Nov. 18, 1969
Jefferson and Taylor	Nov. 21, 1969
Gough and Page	Dec. 2, 1969
Ellis and Hyde	Dec. 4, 1969
McAllister and Leavenworth	Dec. 17, 1969
Eddy and Jones	Dec. 23, 1969
Eddy and Mason	Dec. 23, 1969
Ellis and Mason	Dec. 30, 1969

ELECTRICAL DIVISION

Arguello and Clement	Apr. 29, 1970
Arguello and Euclid	Apr. 29, 1970
20th and Dolores	Apr. 29, 1970
California and Laguna	May 7, 1970
Monterey and Diamond	May 12, 1970
Blanken and Tunnel	May 14, 1970
Mission and Sickles	May 20, 1970
Woodside and Hernandez	June 16, 1970

Complaints by the Month

1969

July	196
August	235
September	196
October	202
November	254
December	184

1970

January	224
February	219
March	186
April	158
May	221
June	191

Field Operations

Checked Operations	586
Walk-Waits Serviced	19
Controllers Changed	473
Intersections Mass Relamped	960
Master and Cascade A.M. Offsets Checked	815
Master and Cascade P.M. Offsets Checked	633
Dial Units Changed	100
Coordination Units Changed	75
Relays Changed	385
Pedestrian Timers Changed	40
Detector Frames Repaired	8
Flashers Changed	18
Signals put out of order by vandalism	21
Cabinet locks adjusted or changed	23
Manual Cords Replaced	8
Pedestrian Pushbuttons Changed	51
Marbelite Poles, 10 ft. Replaced	25
Steel Poles, 10 ft. Replaced	34
Signal Heads Replaced	113
Signal Heads Realigned	309
Signal Lens and Reflectors Replaced	80
Visors Replaced	111

ELECTRICAL DIVISION

Visors Repaired	143
Walk-Waits Realigned	59
Walk-Waits Repaired	40
Controller and/or Meter Cabinets Replaced	56
and Repaired	
Repaired Conduit and Wiring	71
Checked Timing	143
Changed Timing and Placed Timing Cards	74
Neon Transformers Replaced	14
Wait Tubes Replaced	88
Walk Tubes Replaced	37
Don't Walk Tubes Replaced	38

Repaired and Serviced in the Shop

Controllers	476
Dial Units	736
Coordination Units	62
Pedestrian Timers	83
Relays	1,074
Flashers	54
Timers	20
Signal Heads	287
Detector Amplifiers	10
Made up Controller and/or Base Cabinets	16

A total of 21,720 Sixty-Seven Watt Lamps were used.

There were 137 complaints covering damages to Traffic Signals.

Conducted a bi-weekly test of Freeway Detour Signs controlled from the Central Fire Alarm Station.

Conducted weekly tests of . ten (10) Cable Car Pre-empt Intersections, one (1) Cable Car Crossing, and one (1) Turn Table location.

Conducted a monthly test of the Fire Alarm Boxes and Traffic Signal Controls in the Broadway Tunnel.

Reset Time Clocks and Program Devices at forty (40) locations back one hour in October, and ahead one hour in April to conform to Daylight Saving Time in California.

Completed Work Orders and Service Orders in the amount of \$15,789.00 for improvements to signals, as requested by the Traffic Engineers, Department of Public Works.

ELECTRICAL DIVISION

Installed Minitrol Coordination Units at thirteen (13) locations:

Turk and Arguello	Eddy and Mason
Gough and Page	Ellis and Mason
Ellis and Hyde	Arguello and Clement
Eddy and Hyde	Arguello and Euclid
McAllister and	20 th and Dolores
Leavenworth	California and Laguna
Eddy and Jones	Blanken and Tunnel

Relocated signals and/or poles at twelve (12) locations:

Pine and Kearney N.E.	Stockton and Washington S.E.
California and Kearney	3rd and Mariposa N.W.
S.E.	Stockton and Sutter S.W.
San Bruno & Silver S.W.	Stockton and Post N.W.
Clay and Sansome S.W.	16 th and Harrison N.E.
Ocean and Phelan E.C.I.	17 th and Potrero N.W.
Pine and Front N.W.	

Relocated controller cabinets at three (3) locations:

Market and Beale	16 th and Bryant
San Bruno and Silver	

Relocated pullboxes or conduits at eight (8) locations:

19 th and Junipero Serra	6 th and Bryant S.E. and S.W.
N.C.I.	3rd and Paul N.W.
Post and Montgomery S.W.	San Jose and Geneva
6 th and Brannan all runs	12 th and Market South Side
Geary and Laguna N.E.	

Installed new induction type detectors at two (2) locations:

3rd and 16th
Bayshore and Alemany

19th Avenue - Park Presidio Blvd., - Wired and installed special master controller at 19th and Judah and modified master cable at all intersections to provide extra Sunday peak operation.

Bay and Laguna - removed pedestrian signals from Northeast and Southeast.

ELECTRICAL DIVISION

Bush and Octavia - replaced ½ block of master cable.

Great Highway and Lincoln - removed flashing signals and poles.

Jefferson and Taylor - installed extra time lock.

10th and Bryant - replaced Pacific Gas and Electric service.

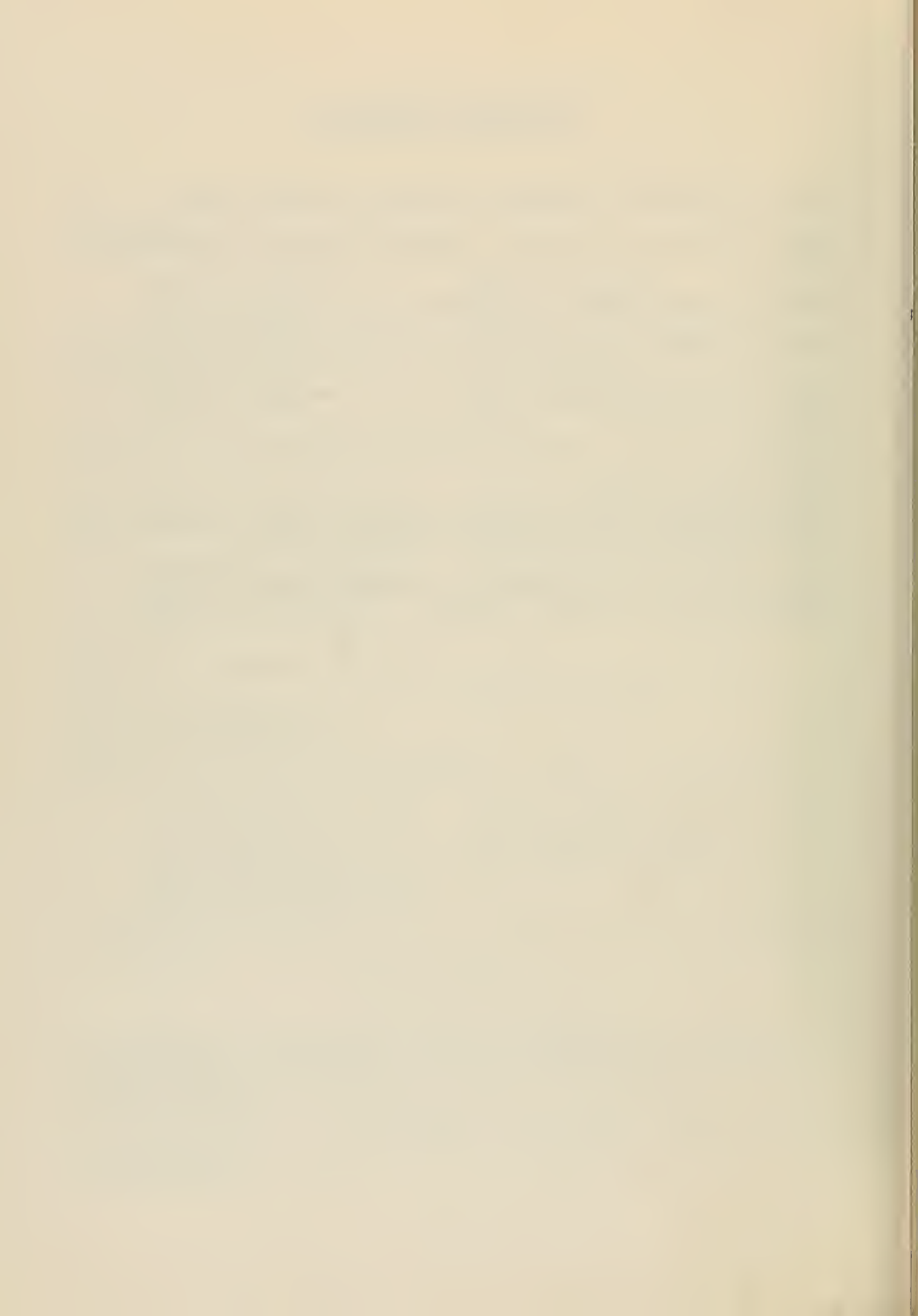
3rd and Army - modified controller to provide for extra left turn signals.

Bush and Van Ness - installed new 3-M signals and poles on both center islands.

Bay and Hyde - modified controller to provide roll back and speed pre-empts for cable car crossing.

Geneva and Moscow - installed new pedestrian heads on Northwest and Southwest corners.

* * * *



MECHANICAL DIVISION

MANUFACTURE, MAINTENANCE & REPAIR

The duty of the Mechanical Division is to maintain and repair all mechanical equipment under the jurisdiction of the Department of Electricity and to manufacture parts when required. This equipment includes the following:

- 1) 2034 Fire Alarm Boxes.
- 2) 469 Police Patrol Boxes.
- 3) 783 Traffic Signal Intersections.
- 4) All mechanical equipment at the Central Fire Alarm Station, Central Radio Station, Hall of Justice Communication's Room, and the Plant at 901 Rankin Street.
- 5) 14,221 Parking Meters.
- 6) 53 Air Raid Warning Sirens.
- 7) Fifty four (54) pieces of gas engine driven equipment - 48 mobile and 6 stationary. The repair of the above equipment was done at the Purchasing Shops under the direction and control of the Machine Shop & Parking Meter Superintendent. The servicing of this equipment was done by one Automotive Serviceman at 901 Rankin Street.
- 8) The maintenance of three Departmental Buildings: Plant, 901 Rankin St., Central Fire Alarm Station, 1003 Turk St., and Central Radio Station, Twin Peaks was directed by the Machine Shop and Parking Meter Superintendent, though the majority of the work was accomplished by the Department of Public Works or through contractual services.

Manufactured:

- 1) Three-fold non-interfering Fire Alarm Boxes were made to replace obsolete Fire Alarm Boxes in the High Value Districts and the new Underground Districts. New and replacement parts for Fire Alarm Boxes, Police Patrol Boxes, Registers, Instruments, and Parking Meters, were manufactured in the Machine Shop as needed.

MECHANICAL DIVISION

- 2) Several new parking meter installations were made at various locations and more installations are projected for the future. There are 18 off-street parking lots with a total of 559 parking meters and stalls.

The total number of parking meters installed is 14,221.

- 3) Special mechanical fixtures and apparatus were designed and manufactured to produce functional improvement. Miscellaneous tool and die, experimental projects, and parking meter tests were undertaken and completed.

Maintenance & Repair:

Necessary and vital repairs were made to the mechanical equipment. Some parking meter maintenance has been deferred and preventive maintenance eliminated due to the shortage of personnel. Our requests for additional employees have been denied yearly even though the installations are increasing steadily.

Painting:

Fire Alarm Boxes, Police Patrol Boxes, Traffic Signals, Controllers Parking Meters and other miscellaneous equipment were prepared and painted in the shop and field. The sirens were not painted due to a shortage of personnel. We are on a four to five year painting cycle rather than a two year cycle recommended for some of the above equipment.

Other Duties:

Data was compiled for the annual budget, necessary specifications for machinery and automotive equipment were written and requisitions for equipment and supplies were made. Reports and correspondence related to the mechanical division were processed.

Records on all mechanical equipment and parking meter field and shop services were kept.

The work was accomplished by the following personnel:

- 1 - Machine Shop & Parking Meter Superintendent.
- 1 - Instrument Maker Foreman.
- 6 - Instrument Makers.

MECHANICAL DIVISION

5 - Maintenance Machinists.
1 - Parking Meter Repairman Foreman.
15 - Parking Meter Repairmen.
4 - Painters.
1 - General Laborer Foreman.
1 - Laborer.
1 - General Clerk Typist.
1 - Janitor.
1 - Automotive Serviceman.
38 - Total

* * * *

PERCENT OF PERSONNEL ALLOCATED - VARIOUS DIVISIONS

No.	Class	Title	Fire	Police	Traffic	Radio	Parking Meters	Air Raid & C.D.	Misc.
1	7123	Machine Shop & Parking Meter Supt.	25	12	16	5	34	1	7
1	7234	Instrument Maker Foreman	35	10	10	8	25	1	11
6	7331	Instrument Makers	47	12	20	7	2	1	11
5	7343	Maint. Machinists					97		3
1	7215	Gen. Laborer Foreman					100		
1	7514	Gen. Laborer					100		
1	7243	Parking Meter Repairman Foreman					100		
15	7444	Parking Meter Repairman					100		
4	7346	Painters	2-70	2-14	2-100	2-4	2-8		2-4
1	7410	Automotive Serviceman	30	15	25	10	15		5
1	2714	Janitor	40	10	30	10			10
1	B512	General Clerk Typist	5	4		1	88		2

-34-

Temporary personnel were hired for vacation relief and special projects, as follows:

1 - 7331 Instrument Maker	73 days
2 - 7343 Machinists	145 "
1 - 7346 Painter	47 "

MECHANICAL DIVISION

SUMMARY OF ACTIVITIES
FISCAL YEAR 1969-70

	<u>Total Number</u>
Manufactured Fire Alarm Boxes, parts and related equipment	7,170
Repaired Fire Alarm Boxes, parts and related equipment	3,270
Manufactured Police Call Boxes, parts and related equipment	1,062
Repaired Police Telephones and related Communications equipment	425
Manufactured Traffic Signal Parts and Special Tools	1,420
Repaired Traffic Signals, parts and related equipment	178
Manufactured and repaired miscellaneous radio equipment items	349
Miscellaneous items manufactured and repaired for Plant and vehicular equipment	1,281
Manufactured jigs, fixtures, tools, stamping dies and patterns for Machine Shop production and maintenance work	66
Manufactured miscellaneous parking meter parts	31,295
Repaired parking meter cases, mechanisms, timers, and miscellaneous parts	20,369
All Registers serviced weekly; all Tappers, Jokers and Repeaters serviced monthly at the Central Fire Alarm Station, 1003 Turk Street.	1,992

PAINTING - FIELD AND SHOP

The following items have been prepared, primed and finish coated:

FIRE ALARM SYSTEM

Fire Alarm Boxes - Field and Shop	885
Fire Alarm Box Posts, Bases, Inner Shells, Sockets, Movement Housings, etc., - Field and Shop	1,037

POLICE COMMUNICATION

Police Call Boxes - Field and Shop	148
Miscellaneous items - Shop	33

MECHANICAL DIVISION

	<u>Total Number</u>
<u>TRAFFIC SIGNALS</u>	
Vehicular Signals - Field	1,030
Vehicular Signals - Shop	534
Signal Controllers - Field	175
Signal Controllers, Doors, Posts, Bases, etc. - Shop	1,345
Walk-Wait Pedestrian Signals - Field	191
" " " " - Shop	195
Signal Posts, Poles, etc., - Field	404
Traffic Signal Visors - Shop	767

RADIO DIVISION

Miscellaneous Radio Equipment - Shop	189
--------------------------------------	-----

PARKING METERS

Parking Meter Cases - Shop	306
----------------------------	-----

MISCELLANEOUS PAINTING AT PLANT, 901 RANKIN ST.,
CENTRAL FIRE ALARM, 1003 TURK STREET, AND CENTRAL
RADIO STATION, TWIN PEAKS

Cabinets, Siren Parts, Ladders (oiled-shellacked), Brackets, Radio Equipment, Parts, Aluminum Strips, Redwood Moulding, touch-up, etc.	295
--	-----

* * * *

MECHANICAL MAINTENANCE & REPAIR



Off-street Parking Lot
installation



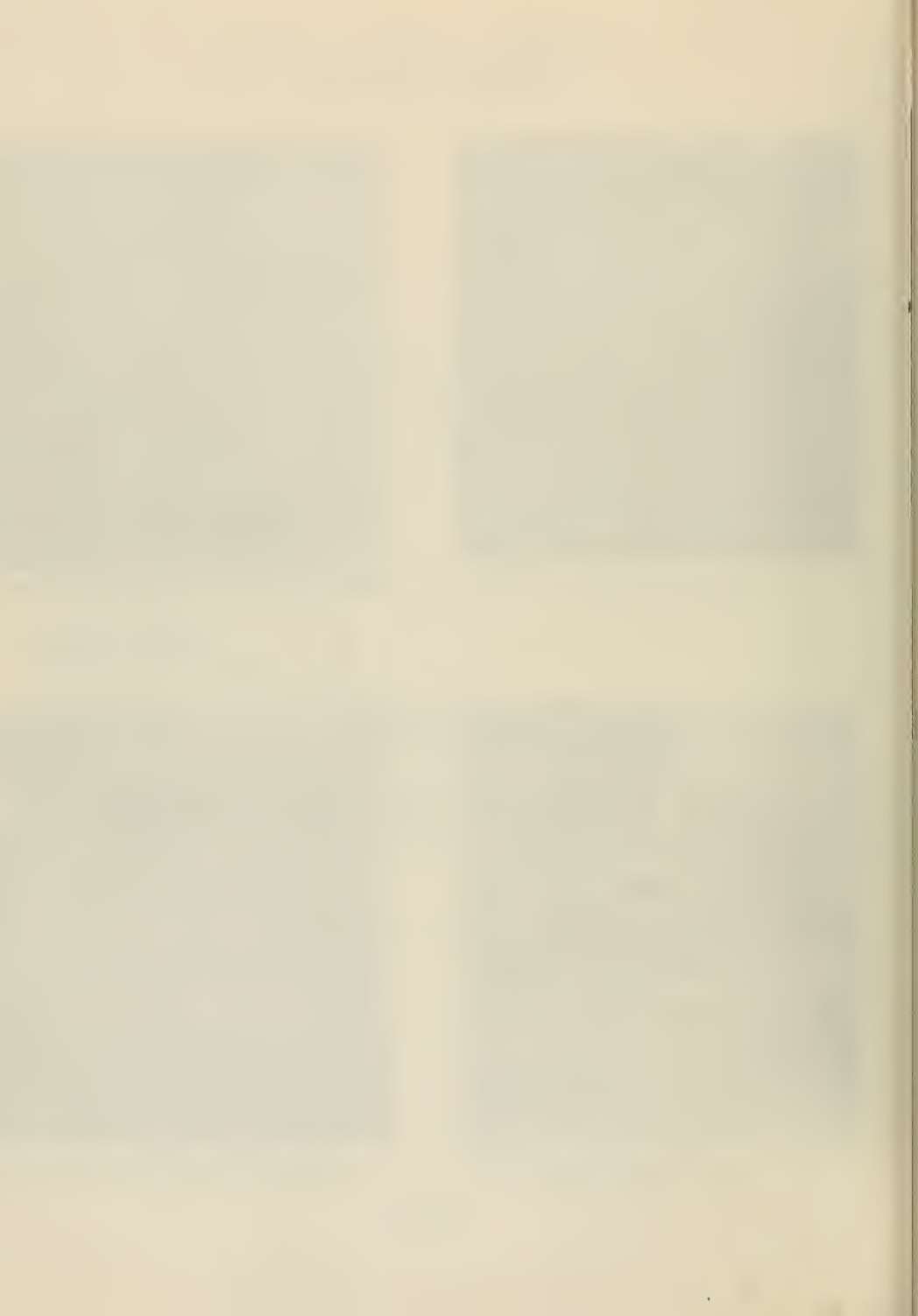
Field Repair to Parking Meters



New 15 minute Parking Meter
installation



Parking Meter Field Maintenance
Van



MECHANICAL MAINTENANCE & REPAIR



Field service to Fire
Alarm Box



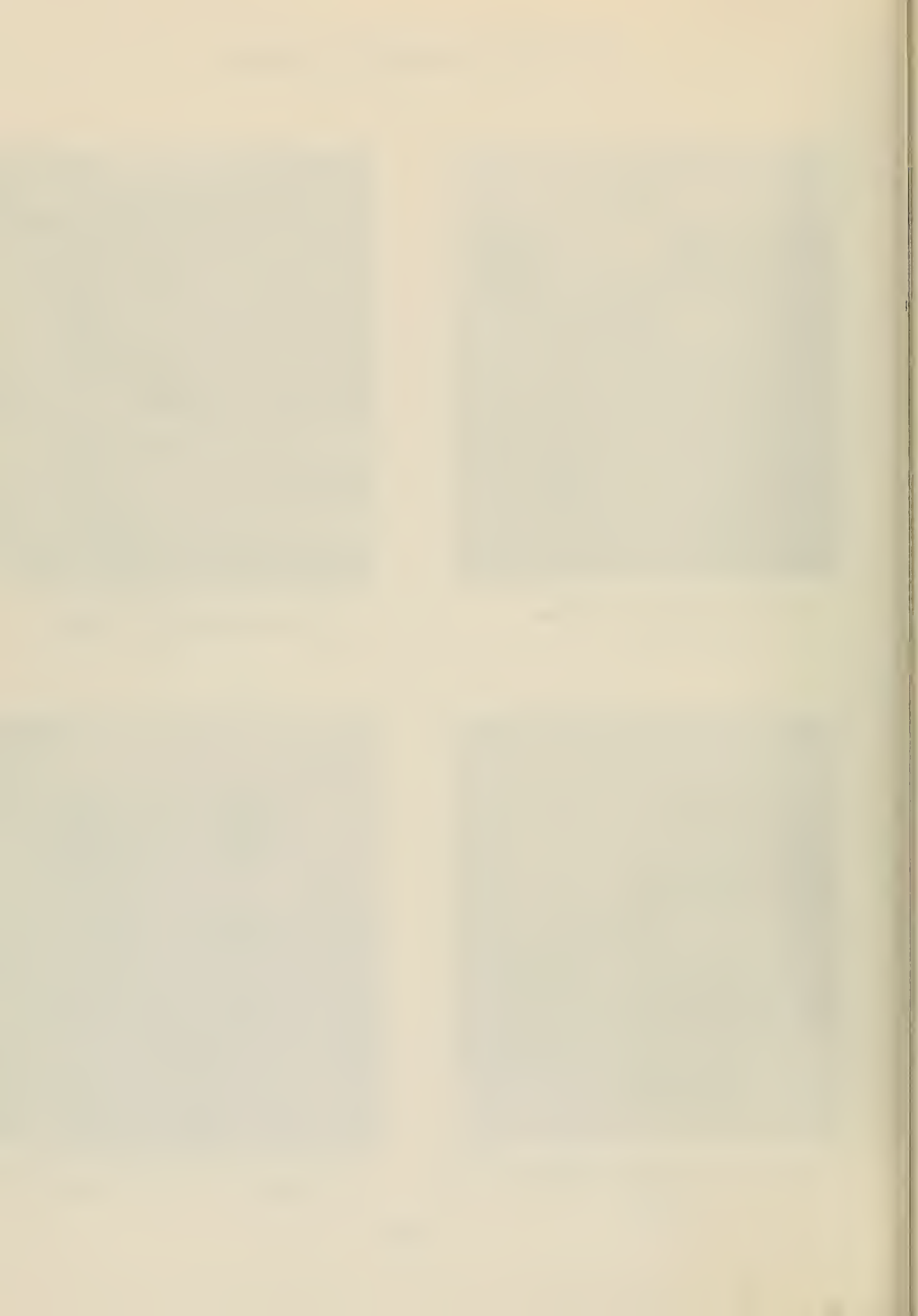
Servicing Traffic Truck



Parking Meter Post Installation
Truck



Shop Repairs to Parking Meters



MECHANICAL DIVISION

SUMMARY OF ACTUAL ANNUAL REPAIRS TO PARKING METERS
FISCAL YEAR 1969-70

Fire Alarm Box Glass Replaced.....	180
Jammed Intentionally.....	92,772
Cases Cleaned.....	439
Damaged Meters Removed.....	1,071
Exchange Heads.....	74
Exchange Mechanisms.....	5,014
Exchange Mechanisms for Cleaning.....	160
Exchange Timers.....	1,136
Hoods Removed.....	508
Lock Open Coin Doors.....	31
Loose Heads.....	194
Loose Mechanisms.....	22
Mechanical Adjustment Mechanisms.....	5,327
Mechanical Adjustment Cases.....	556
Meters Installed.....	918
Meters Removed from Service.....	222
O.K. Requested Inspections.....	1,289
Putty Glass.....	221
Replace Coin Glass.....	713
Replace Coin Lock.....	222
Replace Parts to Cases.....	1,449
Replace Parts to Mechanisms.....	165
Replace Signal Glass.....	1,898
Stuck Coins.....	4,617
Service Coin Door.....	98
Service Coin Lock.....	489
Stuck Indicators.....	430
Stuck Signals.....	536
Stuck Timers.....	741
Unwound Main Springs.....	2,850
Winding Hole Plugged.....	270
Parking Meter Heads Replaced.....	1,339
Checked for Traffic Fines Bureau.....	3,865
Machine Shop Repairs on Cases.....	2,492
Machine Shop Repairs on Mechanisms.....	3,927
Mechanisms Cleaned and Overhauled.....	4,925
Parking Meter Timers overhauled.....	789
Parking Meter Posts Cut.....	315
Parking Meter Flanges Drilled.....	760
Parking Meter Flanges Tapped.....	700
Parking Meter Flanges Bored.....	369
Parking Meter Posts - Straightened.....	1,921
" " " - Removed.....	155
" " " - Relocated.....	86
" " " - Installed.....	888
" " " - Replaced.....	857
" " " - Reset.....	1,495
Parking Meter Complaints received by Telephone:	
Tax Collector's Office.....	4,650
Police Department.....	1,755
Total.....	<u>155,900</u>

MECHANICAL DIVISION
INVENTORY OF PARKING METERS
AS OF JUNE 30, 1970

<u>District</u>	<u>Number</u>	<u>Number in Off-Street Parking Lots</u>
A	873	61
B	939	119
C	1,031	
D	883	40
E	938	
F	913	
G	1,007	
H	1,099	82
I	955	
J	877	20
K	755	72
L	839	
M	865	
N	854	72
O	<u>834</u>	<u>93</u>
Total	<u>13,662</u>	<u>559</u>

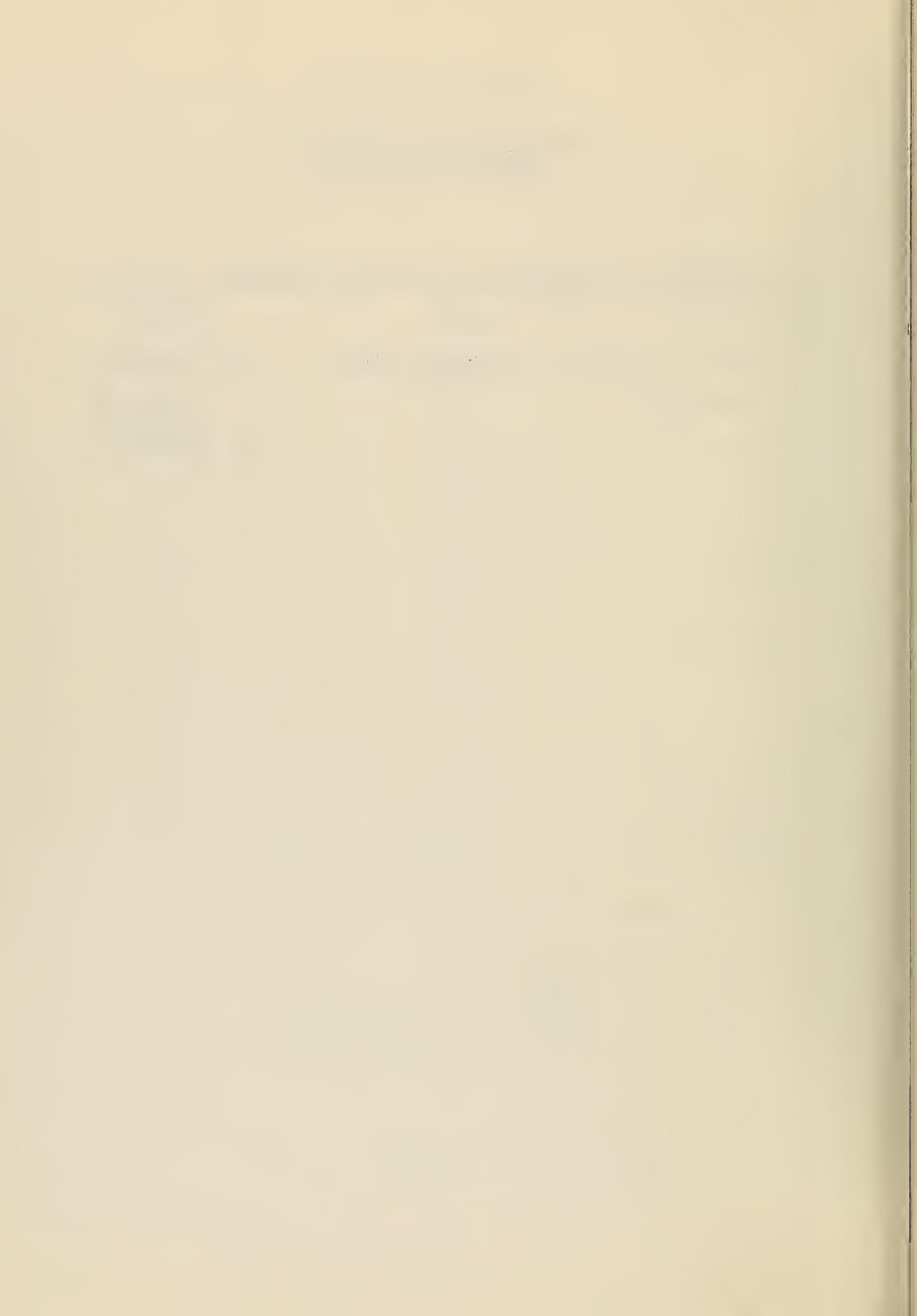
	13,662
	<u>559</u>
Grand Total.....	<u>14,221</u>

MECHANICAL DIVISION

The following shows material costs through vandalism and traffic damages:

Traffic Damages to Parking Meters	\$ 15,348.98
Vandalism	<u>8,662.48</u>
	\$ <u>24,011.46</u>

* * * *



FIRE ALARM OFFICE

The Central Fire Alarm Office at 1003 Turk Street is responsible for receipt of alarms and the dispatching of fire apparatus. The operation of the entire fire alarm telegraph system of San Francisco is centered in this office. Fire Alarm personnel also receive trouble complaints and dispatch repairmen in connection with emergency repairs to traffic signals, police and fire communication equipment, test defective circuits, and operate the Civil Defense air raid warning system.

Personnel assigned to the Fire Alarm Office consist of the following:

- 1 - Chief Fire Alarm Dispatcher
- 9 - Fire Alarm Dispatchers
- 4 - Senior Telephone Operators

Fire Alarm Box circuits in service, including leased telephone lines to Treasure Island	70
New Fire Alarm Boxes in service during Fiscal Year	7
Fire Alarm Boxes discontinued	12
Fire Alarm Boxes transferred	4
Fire Alarm Boxes in service, Dept. of Electricity	1,981
Pacific Fire Extinguisher Fire Alarm Boxes with trouble signals	44
Pacific Fire Extinguisher Fire Alarm Boxes without trouble signals	9
Fire Alarm Boxes pulled for test, including 1,498 school boxes	12,341
Fire Alarm Boxes out of service temporarily, relief box in service	117

Total Fire Alarm Boxes in service : 2,034
(A decrease of 4 from fiscal year 1968-69)

Total Police Boxes in service: 469

The following summarizes complaints received from the Police Department, other Municipal Agencies and private citizens concerning equipment listed below:

Fire Alarm Wire Trouble	317
Sirens	7
Police	227
Radio	24
Traffic Signals	2,473
Teletype	12
Miscellaneous	358
	<u>3,418</u>

FIRE ALARM OFFICE

The following summarizes the activities of the Central Fire Alarm Station for the year ending June 30, 1970:

Fire Alarms of Fire Received and Transmitted	19,743	
Second " " " " " "	129	
Third " " " " " "	40	
Fourth " " " " " "	6	
Fifth " " " " " "	5	
Stills	12,386	
Directs	1,314	
Special Calls	<u>184</u>	33,807

Secondary Signals transmitted covering Alarms
of Fire and routine operational business of
the Fire Department

148,608

182,415*

*This indicates an increase of 2,206 in comparison with statistics
for year ending June 30, 1969.

* * * *

ACCOUNTING (ADMINISTRATION)

The Senior Accountant, under the direction of the General Manager is responsible for the Accounting (Administration) Division. The Division is composed of three Department of Electricity personnel and one storekeeper from the Purchasing Department. In addition to accounting functions, various administrative tasks are assigned which require a portion of the services of two additional personnel. The personnel are as follows:

- 1 - 1652 Senior Accountant
- 1 - 1650 Accountant
- 1 - 1630 Account Clerk
- 1 - 1934 Storekeeper
- 1 - 1446 Senior Clerk Stenographer
- 1 - B-512 General Clerk Typist

For functional use, the Division maintains an orderly system of recording costs and revenues which are compiled and reported to management in timely periodic reports.

For cost control of labor, material, services, and equipment, the Division maintains approximately seventy cost accounts as well as accounting for individual budgetary line items. Also, the Division, during the Fiscal Year 1969-70, compiled costs for approximately 200 individual work orders, special jobs, and projects.

During 1969-70, 328 billings, in the amount of \$67,261, were made to cover special jobs, installation funds and damages to City property. Previous year billings numbered 395 in the amount of \$59,134. Damage billings were \$49,507 during 1969-70 as compared to \$40,049 during 1968-69.

ESTIMATED AND COMPARATIVE REVENUE

	Estimated Revenue <u>1969-70</u>	Collections - Cash Received <u>1969-70</u> <u>1968-69</u>		% Increase (Decrease)
Damage Claims - Traffic Signals. Note A	\$ 22,500	\$ 21,241	\$ 20,663	2.8
Damage Claims - Parking Meters. Note B	1,500	2,373	2,356	.7
Damage Claims - Police & Fire Alarm Facili- ties. Note B	6,000	7,838	13,140	(40.4)
Housemoving Electrical Inspection. Note C	300	59	119	(50.4)
Loudspeaker on Vehicles Note D	126	11	144	(92.4)
Total	\$ <u>30,426</u>	\$ <u>31,522</u>	\$ <u>36,422</u>	(13.5)

COMMENT

Collections include all Department of Electricity Revenue collected by this department or another.

NOTES

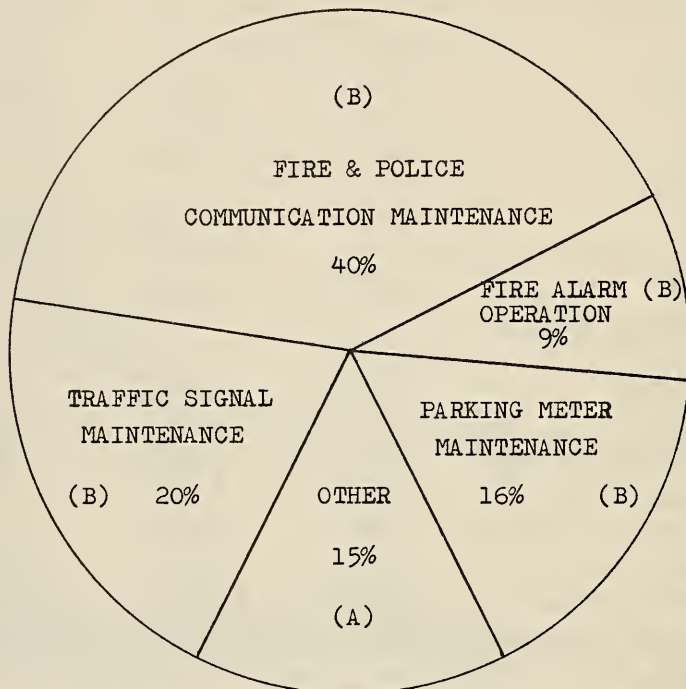
- A) Recovery of damages is deposited to Road Fund.
- B) Recovery of damages is deposited to General Fund.
- C) Collections offset actual cost of 11.79 for each inspection of overhead line wires.
- D) Collections offset actual cost of \$3.50 for each inspection of sound amplifier. This inspection service requirement was discontinued during Fiscal Year 1969-70.

COMPARATIVE EXPENSE STATEMENT

AS OF JUNE 30, 1970

<u>Budget Expense</u>	<u>1968-69</u>	<u>1969-70</u>	<u>Allowance 1969-70</u>	<u>Balance 1969-70</u>
Permanent Salaries	\$ 465,833	\$ 480,408	\$ 501,200	\$ 20,792
Overtime	4,890	10,416	10,417	1
Holiday Pay	6,538	6,311	6,585	274
Temporary Salaries	11,901	9,441	9,441	-
Wages	901,053	951,724	963,745	12,021
Contractual Services	2,827	2,493	2,600	107
Materials & Supplies	101,540	100,527	100,527	-
Equipment	1,402	2,999	3,203	204
Equipment-Overhead Reserve	18,332	-	-	-
Fixed Charges	120	128	128	-
Auto Repair	9,100	11,004	11,004	-
Reproduction Services	389	533	533	-
Office Eqpt. Repair	181	39	39	-
Telephone & Telegraph	7,590	7,749	7,749	-
Scavenger Service	836	836	836	-
Light, Heat & Power	<u>11,211</u>	<u>10,600</u>	<u>10,600</u>	<u>-</u>
Total Budget Expense	<u>\$1,543,743</u>	<u>\$1,595,208</u>	<u>\$1,628,607</u>	<u>\$33,399</u>
<u>Job Expense</u>				
Interdepartmental Work Orders	\$ 161,642	\$ 260,916	\$ 723,463	\$462,547
Special Projects - Replacements & Improvements	11,405	3,835	52,563	48,728
Installation Fund Jobs	11,908	8,931	17,153	8,222
Private Contractor Jobs	<u>8,570</u>	<u>7,918</u>	<u>17,052</u>	<u>9,134</u>
Total Job Expense	<u>\$ 193,525</u>	<u>\$ 281,600</u>	<u>\$ 810,231</u>	<u>\$528,631</u>
Total Expense	<u>\$1,737,268</u>	<u>\$1,876,808</u>	<u>\$2,438,838</u>	<u>\$562,030</u>

DEPARTMENT OF ELECTRICITY COST BREAKDOWN 1969-1970



A) COST (REIMBURSED) SPECIAL JOBS AND INTERDEPARTMENTAL WORK ORDERS.

B) BUDGET COST.

COMMENTS

MAINTENANCE INCLUDES ALL DAMAGES WITHOUT OFFSET FOR COLLECTIONS.

FIRE AND POLICE MAINTENANCE INCLUDE UNDERGROUND AND OVERHEAD CONSTRUCTION, TELETYPE AND TELEPHONE SYSTEM, SWITCHBOARD AND RELATED EQUIPMENT AT THE HALL OF JUSTICE AND ALL FIRE HOUSE STATIONS.

ADMINISTRATIVE AND OVERHEAD COSTS ARE ASSIGNED TO THE ABOVE FUNCTIONS ON A PRO-RATA COST BASIS.

DEPARTMENTAL COMMITTEES

SAFETY COMMITTEE

The Department of Electricity Safety Committee, composed of eight members, convened each month, and minutes were written of the business transacted at the meetings.

Industrial Accidents

Eleven (11) were reviewed, one (1) was ruled as Non-Preventable - 10 being found Preventable.

Defensive Driving

Various personnel of the Department of Electricity attended (first time, and as refresher) and completed the course.

Bulletin Board

The Safety Bulletin Board was maintained up-to-date. Posters received from the San Francisco Chapter of the National Safety Council were distributed to members of the Safety Committee for posting on the various boards in each division.

Drives

Annual Dollar Membership Drive - all tickets distributed to this Department were sold and receipts and money turned in to the San Francisco Chapter of the National Safety Council.

At the close of business June 30, 1970, only three (3) recommendations made by the Safety Committee were pending.

Safety Bulletins, magazines, newspapers, and directives were shown to members of the Committee to keep them up-to-date on the latest in Safety and also for them to pass the information received on to personnel in their particular division.

The General Manager, each member of the Safety Committee, and each Division Head wish again to express their appreciation for the assistance afforded by the San Francisco Chapter of the National Safety Council.

DEPARTMENTAL COMMITTEES

VEHICLE ACCIDENT REVIEW COMMITTEE

The Department of Electricity has a Motor Vehicle Accident Review Committee which has been active since February, 1965. The Committee has three members appointed by the General Manager.

The purpose of the Motor Vehicle Accident Review Committee is the prevention of motor vehicle accidents by promoting the concept of Defensive Driving.

The committee investigates the following:

- 1) Driver's report of the accident.
- 2) Police Vehicle Accident Report.
- 3) Insurance reports, if any.
- 4) Facts based on an investigation by City representatives, if any.
- 5) Statements of witnesses, if any.
- 6) Diagrams, photographs, and any other available evidence.

At the meeting, each accident is thoroughly discussed, and a decision is reached whether the accident is "Preventable" or "Unpreventable". The employee is then notified in writing and if the accident was judged "Preventable", the employee has 15 calendar days to appeal the decision of the committee by writing to the General Manager.

Ten (10) accidents were reviewed and five (5) were declared "Preventable", with five (5) "Unpreventable". The Department of Electricity employees drove forty-two vehicles approximately 333,000 miles during the Fiscal Year 1969-70.

DEPARTMENTAL COMMITTEES

RETIREMENT COMMITTEE

Our Retirement Committee consists of representatives of the various Divisions and classifications working in our Department, with a permanent treasurer and secretary, and the chairmanship rotating to the Division within which the retiree is assigned.

During the year the Retirement Committee arranged for appropriate ceremonies honoring the below listed retirees:

<u>Name</u>	<u>Date Retired</u>	<u>Classification</u>	<u>Years of Service</u>
Frank Hurley	10-1-69	Machinist	20
Lillian Lambert	12-1-69	Sr. Telephone Operator	15
Charlotte Martinez	12-1-69	"	18
Albert Crawhall	3-1-70	Painter	20
Thomas Finegan	3-1-70	Parking Meter Repairman	20
David Ferrier	3-14-70	"	25
Virgil Harris	5-1-70	Electrical Engr.	25
George Kopman	6-30-70	Cable Splicer	18

